

VIT 122 Course Outline as of Summer 2017**CATALOG INFORMATION**

Dept and Nbr: VIT 122 Title: VINE CANOPY MNGMT

Full Title: Vineyard Canopy Management

Last Reviewed: 9/13/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	9.00	2	Lecture Scheduled	18.00
Minimum	1.00	Lab Scheduled	0	2	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	9.00		Contact Total	18.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 36.00

Total Student Learning Hours: 54.00

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 281.21

Catalog Description:

Latest techniques in developing trellising systems for winegrape production. Principles and practices of canopy management are covered, focusing on improving grape and wine quality.

Prerequisites/Corequisites:**Recommended Preparation:**

Course completion of VIT 120

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

Description: Latest techniques in developing trellising systems for winegrape production. Principles and practices of canopy management are covered, focusing on improving grape and wine quality. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Course completion of VIT 120

Limits on Enrollment:

Transfer Credit:

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

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:

IGETC:	Transfer Area	Effective:	Inactive:
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CSU Transfer:	Effective:	Inactive:
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UC Transfer:	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. Explain how vine microclimate affects vine growth, fruit quality and bud fruitfulness.
2. Identify various canopy management techniques and explain how each can alter vine microclimate.
3. Assess and evaluate canopy management practices.
4. Make recommendations for improvement of vine canopy management.

Objectives:

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

1. Define and give examples of grapevine canopy management techniques.
2. Compare and contrast various grapevine trellis support systems.
3. Describe the yearly vineyard cycle in the context of both vegetative and reproductive growth.
4. Compare and contrast pruning methods for producing a balanced vine.
5. Summarize the importance of sunlight and microclimate on vine productivity.
6. Evaluate the relationship between effective canopy management and winegrape quality.
7. Assess canopy management practices for their effects on winegrape quality.

Topics and Scope:

I. Introduction to Canopy Management

- A. Definitions and vocabulary
- B. Review of grapevine phenology
- C. Goals of canopy management
- D. Relationship of canopy management to modern pruning concepts
- E. The ideal canopy

II. Overview of Pruning, Training, and Trellis Systems

- A. Pruning systems
 - 1. Spur
 - 2. Cane
 - 3. Modified
- B. Trellis systems
 - 1. Vertical and vertical split canopies
 - 2. Horizontal split canopies
 - 3. Shoot positioning versus non-shoot positioning
 - 4. Retro-fitting
- III. Basic Grapevine Physiology and Growth Cycle
 - A. European: 6 phases of the growth cycle
 - B. German/Australian: 47 phases of the growth cycle
- IV. Vine Balance
 - A. Site vigor potential and its components
 - B. Pruning weights method
 - C. Canopy volume method
 - D. Formula for pruning young vines
 - E. Dense vs. open canopies
- V. Importance of Sunlight
 - A. Quantity, quality, and distribution
 - B. Leaf exposure
 - C. Fruit exposure
 - D. Bud exposure
 - E. Influence of microclimate on vine productivity
 - 1. Exposed canopies, sunburn and other potential problems
 - 2. Temperature and berry damages
 - 3. Strategies to protect grapes from sunburn
- VI. Canopy Configuration
 - A. Single curtain
 - B. Double curtain
 - C. Influence of training/trellis system on vine growth
- VII. Managing Vine Vigor
 - A. Tools
 - 1. Irrigation
 - 2. Fertilization
 - 3. Rootstocks
 - 4. Trellis systems
 - 5. Modified pruning methods
 - B. Managing high vigor vs. low vigor vines
- VIII. Canopy Assessment
 - A. Vineyard score card
 - B. Shoots / meter
 - C. Sensory evaluation of wine and canopy management trials
- IX. Troubleshooting Canopy Management Problems

Assignment:

Representative assignments:

- 1. Reports on lecture demonstrations.
- 2. Balance a vine through pruning calculations (problem solving) and pruning techniques (skill demonstration through illustrations).
- 3. Complete an Internet search to identify and locate trellis and hardware

- companies. Print and compile findings.
4. Reading: 10-15 pages per week.
 5. 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.

Lecture reports.

Writing
10 - 30%

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

Pruning calculations; Internet search.

Problem solving
20 - 30%

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

Pruning.

Skill Demonstrations
20 - 30%

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

Final Exam: Multiple choice, True/false, Matching items, Completion, Short answer.

Exams
20 - 40%

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

Participation.

Other Category
0 - 10%

Representative Textbooks and Materials:

The Grapevine from the Science to the Practice of Growing Grapes for Wine, P. Iland, Patrick Iland Wine Promotions Pty., 2011
Instructor prepared materials.