Las Positas College
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Course Outline for VWT 33

SUMMER VITICULTURE OPERATIONS

Effective: Summer 2018

I. CATALOG DESCRIPTION:
VWT 33 — SUMMER VITICULTURE OPERATIONS — 1.00 units

This course covers vineyard practices for the summer session. The class will manage the Las Positas College Campus Hill vineyard, with an emphasis on the practical applications of viticulture theory including vine training, canopy management, assessment of insect and disease problems specific to the appellation, irrigation applications relating to soil and leaf moisture and crop estimation.

0.50 Units Lecture 0.50 Units Lab

Strongly Recommended
VWT 10 - Introduction to Viticulture
with a minimum grade of C

Grading Methods:
Letter or P/NP

Discipline:
- Agriculture Production

	MIN
Lecture Hours:	9.00
Lab Hours:	27.00
Total Hours:	36.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering this course, it is strongly recommended that the student should be able to:

A. VWT10
1. explain the impact that California has had on global wine grape production
2. describe grapevine biology and physiology
3. identify the above and below ground components of the grape vine throughout the seasonal intervals of grape vine development
4. distinguish between specific grape varieties and how they can be utilized in various production programs
5. illustrate the importance of the relationship of soil and climate relative to quality grape and wine production
6. evaluate and manage the seasonal specific requirements of the vineyard and apply the appropriate cultural practices
7. interpret the harvest process from planning through processing
8. analyze the basic tenets of winemaking

IV. MEASURABLE OBJECTIVES:

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

A. plan and implement a vineyard canopy management program;
B. assess insect population and apply control and/or preventative methods as appropriate;
C. assess disease incidence and apply control and/or preventative methods as appropriate;
D. describe vineyard floor management practices;
E. assess and repair irrigation system failures;
F. program and operate an irrigation system;
G. assess bird pressure and apply control and/or preventative methods as appropriate;
H. perform cultural practices that will improve grape quality;
I. follow prescribed formulas to accurately estimate crop levels;
J. collected data using evaluative methods and equipment to determine fruit ripeness parameters including pH, degrees brix, titratable acidity and sensory assessments;
K. prepared for fruit harvest.

V. CONTENT:
A. Canopy management practices
1. Lecture: the canopy microclimate

2. Lab: bud removal, shoot thinning and shoot tucking
B. Insect population evaluation and control methods
C. Disease incidence evaluation and control methods
D. Vineyard floor management practices
    1. Lecture: weeds, beneficials and cover crops
    2. Lab: vineyard weed identification and removal
E. The irrigation system
    1. Lecture: materials, preparation and installation
    2. Lab: irrigation system repairs
F. Irrigation scheduling and system operation
    1. Lecture: The irrigation controller
    2. Lab: programing the irrigation controller
G. Bird population evaluation and control methods
    1. Lecture: Bird pressure
    2. Lab: installing bird netting
H. Cultural practices for quality grape production
I. Estimating crop levels
J. Fruit ripeness parameters and evaluation methods
    1. Lecture: what are ripeness parameters?
    2. Lab: using a refractomer and pH meter in the vineyard
K. Harvest prepartion

VI. METHODS OF INSTRUCTION:
A. **Lecture** -
B. **Discussion** -
C. **Classroom Activity** - Student hands-on activities
D. **Audio-visual Activity** -
E. **Field Trips** -
F. **Demonstration** -

VII. TYPICAL ASSIGNMENTS:
A. Read Chapter 16 in your textbook.
B. Write a 3 page paper on how evapotranspiration data assists in irrigation scheduling.
C. Collect at least 3 leaf samples from any vineyard and prepare a compound microscope to view the stomata in class.
D. Using the supplied materials of pvc glue, primer, pvc piping, and fittings, complete a secure and successful bond of piping to misc. fittings.

VIII. EVALUATION:
A. **Methods**

1. Exams/Tests
2. Quizzes
3. Papers
4. Field Trips
5. Group Projects
6. Class Participation
7. Home Work
8. Final Performance

B. **Frequency**

1. At least two exams/tests/quizzes per semester
2. At least one written paper (approximately 2-4 pages) per semester
3. At least one field trip off campus
4. one group project per semester
5. Daily class participation
6. Weekly homework
7. Final presentation of group project

IX. TYPICAL TEXTS:
1. Keller, Marcus. *The Science of Grapevines.* 2nd ed., Academic Press, 2015.
2. Goldhammer, Ted. *Grape Growers Handbook.* 2nd ed., Apex, 2015.
3. White, Robert. *Understanding Vineyard Soils.* 2nd ed., Oxford University Press, 2015.

X. OTHER MATERIALS REQUIRED OF STUDENTS:
A. Due to the outdoor, summer working environment offered by this class, having appropriate outdoor wear (boots, gloves and hat) is strongly recommended
B. Professional grade pruning shears