



VWT 132 - Vineyard Soils, Fertilizers & Irrigation Course Outline

Approval Date: 05/10/2006

Effective Date: 08/14/2006

SECTION A

Unique ID Number CCC000336151

Discipline(s)

Division Career Education and Workforce Development

Subject Area Viticulture and Winery Technology

Subject Code VWT

Course Number 132

Course Title Vineyard Soils, Fertilizers & Irrigation

TOP Code/SAM Code 0104.00* - Viticulture, Enology, and Wine Business* / B
- Advance Occupational

Rationale for adding this course to the curriculum Typo corrected for Catalog

Units 3

Cross List N/A

Typical Course Weeks

Total Instructional Hours

Contact Hours

Lecture 54.00

Lab 0.00

Activity 0.00

Work Experience 0.00

Outside of Class Hours 108.00

Total Contact Hours 54

Total Student Hours 162

Open Entry/Open Exit No

Maximum Enrollment

Grading Option Letter Grade or P/NP

Distance Education Mode of Instruction

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog Introduction to basic principles of soil science, mineral nutrition and
Description plant/water relationships for North Coast grape production.

Schedule
Description

SECTION D

Condition on Enrollment

- 1a. **Prerequisite(s):** *None*
- 1b. **Corequisite(s):** *None*
- 1c. **Recommended:** *None*
- 1d. **Limitation on Enrollment:** *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

- A. Basic principles of soil science and use of fertilizers and irrigation water.
- B. Applicable federal, state and local regulations.
- C. Sources of subject matter research materials.
- D. Technical writing skills appropriate to subject matter.
- E. Skills required in the workplace.

2. Course Objectives: Upon completion of this course, the student will be able to:

- A. Distinguish among different soil types
- B. Predict likely grapevine performance based on soil type
- C. Assess grapevine mineral nutrition status
- D. Create a program to address mineral nutrition deficiencies and toxicities.
- E. Interpret information from soil and plant tissue laboratory analysis to develop proper vineyard management practices.
- F. Select and apply fertilizers to the vineyard.
- G. Appraise the water status of the soil and the grapevine.
- H. Choose appropriate irrigation practices.
- I. Interpret information from water laboratory analysis to develop proper vineyard management practices.
- J. Create a plan to manage soil organic matter.
- K. Prepare an erosion control plan.
- L. Select vineyard practices to overcome problems in soils.
- M.

3. Course Content

- A. Basic properties of soils
- B. Grapevine mineral nutrition--deficiency
- C. Grapevine mineral nutrition--toxicities
- D. Soil laboratory analysis
- E. Plant tissue laboratory analysis
- F. Fertilizers
- G. Water relations in plants and soils
- H. Irrigation practices
- I. Water laboratory analysis
- J. Soil organic matter management
- K. Erosion control.
- L. Management of problem soils
- M.

4. Methods of Instruction:

5. Methods of Evaluation: Describe the general types of evaluations for this course and provide at least two, specific examples.

Additional assessment information:

A midterm examination and a final examination.

Examples include:

- a midterm examination consisting of true/false and multiple choice questions
- a final examination consisting of true/false, multiple choice and essay questions.

Letter Grade or P/NP

6. Assignments: State the general types of assignments for this course under the following categories and provide at least two specific examples for each section.

A. Reading Assignments

-Assigned readings from class handouts (example: "Laboratory Diagnostic Methods")

-Assigned readings from the textbooks (example: "Soil and Plant Growth" chapter in Western Fertilizer Handbook)

B. Writing Assignments

Writing:

Essay or short paper (example: midterm examination essay question in which the student describes the nature of the typical alluvial Napa Valley soil profile).

Problem Solving:

Essay or short paper (example: final examination essay question in which the student proposes the selection of alternate vineyard fertilization and irrigation options).

C. Other Assignments

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7. Required Materials

A. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.

Book #1:

Author: Dr. Stephen J. Krebs

Title: VWT 132 Workbook

Publisher: NVC Printing

Date of Publication: 2006

Edition: 1st

Book #2:

Author: Soil Improvement Committee

Title: Western Fertilizer Handbook

Publisher: Interstate Publishers

Date of Publication: 2002

Edition: 9th

Book #3:

Author: USDA staff writers

Title: Soil Biology Primer
Publisher: Soil and Water Conservation Society
Date of Publication: 2000
Edition: 1st

B. Other required materials/supplies.