



VWT 233 - Advanced Viticulture Course Outline

Approval Date: 11/14/2019

Effective Date: 01/22/2020

SECTION A

Unique ID Number CCC000609444

Discipline(s) Agricultural Production

Division Career Education and Workforce Development

Subject Area Viticulture and Winery Technology

Subject Code VWT

Course Number 233

Course Title Advanced Viticulture

TOP Code/SAM Code 0199.00* - Other Agriculture and Natural Resources* / E - Non-Occupational

Rationale for adding this course to the curriculum This course provides next level study for students intending to work or already working in a vineyard profession. It combines the course content of some archived 1 unit courses including "Cover Crops" and "Vineyard Propagation".

Units 3

Cross List N/A

Typical Course Weeks 18

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 35

Grading Option Letter Grade or P/NP

Distance Education Mode of Instruction On-Campus

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog Description Advanced course in viticulture, including more in depth study of rootstocks, grapevine propagation, cover cropping, grape development, and new technologies in precision viticulture. Study of viticultural impacts on grape and wine quality. Sustainable farming practices are emphasized.

Schedule Description One time per week, 3 hour slot.

SECTION D

Condition on Enrollment

1a. Prerequisite(s)

- VWT 130 with a minimum grade of C or better

1b. Corequisite(s): *None*

1c. Recommended: *None*

1d. Limitation on Enrollment: *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

- A. Advance understanding of viticulture and nursery practices and the science of the grapevine.
- B. Acquire and polish skills required in the workplace.

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

- A. Assess the use of appropriate rootstock cultivars for particular production goals, soil types, or soil pathogens.
- B. Understand and integrate knowledge of grapevine growth, science, and hormonal control into vineyard management practices.
- C. Demonstrate knowledge of grapevine propagation and nursery practices.
- D. Select cover crops for the amelioration of a wide variety of vineyard conditions and problems.
- E. Maintain knowledge and keep current with emerging viticulture practices and technologies.
- F. Implement current best management practices with respect to sustainability and minimizing impacts on the environment.
- G.

3. Course Content

- A. Vegetative propagation technique and practice
- B. Field budding and grafting technique and practice
- C. Interactions of rootstock, site and soil.
 - a. Rootstock resistances to nematodes and virus
 - b. Scion and rootstock interaction
- D. Clonal diversity within *Vitis vinifera* cultivars
 - a. Clones and wine style concerns
- E. Use of winter cover crops in vineyard management
 - a. Impacts of various covers on site fertility
 - b. Cover crop relationships to insects pests and natural enemies
- F. Role of sunlight and temperature in fruit development
- G. Role of grapevine hormones and their use in vineyard management

- H. Role of leaf area and canopy manipulation in yield and berry development
- I. Improvement of wine quality through vineyard practices
- J. Understanding and use of emerging theories and technologies in vineyard management practices
- K. Non-grape improvements to vineyard sustainability
 - a. Use of hedgerows for improving biodiversity and sustainability
 - b. Use of animals in vineyard management
 - c. Composting practices and techniques
 - d.

4. Methods of Instruction:

Activity:

Directed Study:

Discussion:

Field Trips:

Lecture:

Observation and Demonstration:

Projects:

Visiting Lecturers:

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

Typical classroom assessment techniques

Exams/Tests -- Multiple choice, true false, long and short written answer.

Quizzes --

Research Projects --

Papers --

Oral Presentation --

Field Trips --

Class Participation --

Class Work -- Group projects and critical thinking exercises.

Home Work -- Reading and evaluation of scientific papers relevant to the area of study.

Final Exam --

Mid Term --

Additional assessment information:

Midterm examination, Final examination,

Reading of and presentation of scientific journals

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 reading from text or of instructor distributed papers (example: Chapter 6.2 in The Science of Grapevines on Grape Composition and Fruit Quality).

B. Writing Assignments

Short research paper on various topics (example: Research drought resistant rootstocks and their relationship with saline soils).

Problem solving (example: Winemaker complains that clusters from vines in block A lack uniformity. What can you do next year to promote uniform grape development?)

C. Other Assignments

D.

7. Required Materials

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

Book #1:

Author: Keller, M.

Title: The Science of Grapevines

Publisher: Elsevier

Date of Publication: 2015

Edition: 2

Book #2:

Author: Mullins, M., G. Bouquet, A. Williams L., E.

Title: Biology of the Grapevine

Publisher: Cambridge University Press

Date of Publication: 1992

Edition:

B. Other required materials/supplies.