

Department:

Viticulture and Enology

Course Description:

This course is designed to introduce students to current practices for establishing a commercial vineyard and maintaining its health and productivity. Topics include varietal selection, site selection, site preparation, equipment, first season establishment, vine growth development and training, trellis systems, vine propagation, weed control, and vine disease control. Field practicum sessions consisting of 16 hours of hands-on experience will be scheduled in area vineyards.

Course Competencies:

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

1. Demonstrate the use of a Gantt diagram to schedule the seasonal vineyard tasks.
2. Name and describe four major species of grapes commercially viable in his/her area.
3. Name and describe four American varieties.
4. Identify sources and availability of desirable varieties in his/her area.
5. Establish differences between winter hardiness indexes used in nurseries.
6. Locate individual sites in the USDA Plant Hardiness Zone index.
7. Distinguish between grafted and non-grafted grape vines.
8. Establish differences between common commercial varieties.
9. Differentiate between French-American hybrids and vinifera.
10. Determine disease susceptibility of commercial grape varieties in specific regions.
11. Identify and describe six major grape diseases.
12. Describe three pest control methods.
13. Describe organic control methods.
14. List the requirements of the state certification program in his/her state.
15. Demonstrate the proper interpretation of pesticide labels as they apply to legal and civil issues.
16. Determine the total length of fruiting zone per acre for most common row spacing and trellises.
17. Take a soil sample according to the recommendations of the Soil Testing Lab in a specified state.
18. Measure pH on samples from around a specific vineyard.
19. Identify pH variation in the soil of a specified vineyard.
20. Describe the process of implementation of a soil fertility plan, including timing and application methods.
21. Demonstrate the ability to read a compass and topographical maps.
22. Identify magnetic and geographical north.

23. Identify drainage patterns.
24. Produce a vineyard plan that includes layout diagram, number of vines, hardware, and training trellis.
25. Evaluate slope and aspect.
26. Identify and describe three modern trellis systems.
27. Identify and describe three outdated trellis systems.
28. Compare and contrast spring and fall planting practices.
29. Demonstrate proficiency in stock selection, proper planting methods, and post-planting care.
30. Identify buds and bud anatomy.
31. Differentiate between one-season old vine wood and older wood.
32. List and describe bud and shoot stages.
33. Differentiate between trunk, cordon, shoots, suckers, fruiting spurs, and renewal spurs.
34. Determine feet of cordon per acre.
35. Determine feet of cordon per vine.
36. Identify high-tension trellis wire, guy wire, and braided cable.
37. Calculate number of posts per acre.
38. Draw details of four popular trellis configurations.
39. Differentiate between eight trellis configurations.
40. Identify vine anatomy.
41. Identify steps for trunk and cordon selection.
42. Identify proper training procedures.
43. Determine establishment costs.
44. Analyze return on investment.
45. Perform a market survey.

Course Content:

- A. Costs and Returns of Vineyard Establishment and Operation
- B. Vineyard Site Selection
- C. Wine Grape and Rootstock Varieties
- D. Vineyard Design and Establishment
- E. Pruning and Training
- F. Grapevine Canopy Management
- G. Crop Yield Estimation and Crop Management
- H. Nutrient Management
- I. Grapevine Water Relation and Irrigation
- J. Spray Drift Mitigation
- K. Disease Management
- L. Major Insect and Mite Pests of Grapes
- M. Vineyard Weed Management
- N. Wildlife Deterrence
- O. Grape Purchase Contracts and Vineyard Leases
- P. Wine Grape Quality and Time to Pick

Learning Assessments:

Students will be evaluated using portfolios and presentations, written examinations, laboratory and field observations, class projects and activities, active participation in course dialog and scholarly activities including discovery, application and integration.

Instructional Materials:

Wine Grape Production Guide for Eastern North America, Wolf et al., National Resource, Agriculture, and Engineering Service, 2008 ISBN 978-1-933395-12-8.

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students **must** complete the "Disabilities Self-Identification Form" at this link:
<https://highlandcc.edu/pages/disability-services>.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.