



South Central College

# VITI 1111 Introduction to Viticulture and Vineyard Establishment

## Course Outcome Summary

### Course Information

<b>Description</b>	This course is designed to introduce students to current practices for establishing a commercial vineyard and maintaining its health and productivity once established. Topics covered include varietal selection, site preparation, equipment, site selection, first season establishment, vine growth development and training, trellis systems, vine propagation, weed control and vine disease control. Field practicum sessions consisting of 32 hours of hands-on experience will be scheduled in area vineyards. (Prerequisites: None)
<b>Total Credits</b>	3
<b>Total Hours</b>	64

### Types of Instruction

Instruction Type	Credits/Hours
Lecture	2/32
Lab	1/32

### Pre/Corequisites

None

### Institutional Core Competencies

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

### Course Competencies

**1. Schedule seasonal activities in the viticulture and enology industry.**

**Learning Objectives**

Demonstrate the use of a Gantt diagram to schedule seasonal tasks.  
Outline and schedule employee hours and tasks.

**2. Recognize the major vitis species in the world.**

**Learning Objectives**

Name and describe major species and varieties of grapes commercially viable in your area.

Name and describe hybrid varieties.

**3. Explain the characteristics of grape growing regions and vitis species and hybrids suitable to the region.**

**Learning Objectives**

Identify sources and availability of desirable varieties in your region.  
Identify most prevalent diseases in your region.  
Establish differences between winter hardiness indexes used by nurseries.  
Locate individual site in the USDA Plant Hardiness Zone Index.  
Distinguish between grafted and non-grafted grape vines.

**4. Access viable cultivars of red and white wine grapes and table grapes.**

**Learning Objectives**

Establish differences between common commercial varieties.  
Differentiate between French-American hybrids and vinifera.  
Determine disease susceptibility of commercial grape varieties in specific regions.

**5. Describe the basic principles of pest control and disease management, with a focus on weed control and management.**

**Learning Objectives**

Identify and describe six major vineyard pests.  
Identify and describe six major grape diseases.  
Describe three pest control methods of identified pests and diseases.  
Describe organic control methods.  
List the requirements of the state pesticide use certification program in your state.  
Demonstrate the proper interpretation of pesticide labels as they apply to legal and civil issues.

**6. Relate the procedures involved in the proper implementation of a soil fertility program in the vineyard.**

**Learning Objectives**

Take a soil sample according to the recommendations of the Soil Testing Lab in a specified state.  
Measure pH on samples from around a specified vineyard.  
Identify pH variation in the soil of a specified vineyard.  
Describe the process of implementation of a soil fertility plan, including timing and application methods.

**7. Demonstrate the ability to evaluate and apply proper site selection criteria.**

**Learning Objectives**

Demonstrate the ability to read a compass and topographical maps.  
Identify magnetic and geographical north.  
Identify air and soil drainage patterns.  
Produce a vineyard plan that includes layout diagram, number of vines, hardware, and training trellis.  
Evaluate slope and aspect.  
Identify appropriate pre-planting site preparation.

**8. Demonstrate planting practices.**

**Learning Objectives**

Identify and describe three trellis systems.  
Compare and contrast spring and fall planting practices.  
Demonstrate the ability to calculate number of vines per acre as a function of vine spacing and row spacing.  
Determine the total length of fruiting zone per acre for most common row spacing and trellises.  
Complete stock selection, proper planting methods, and post-planting care.

**9. Explain vine growth development and training.**

**Learning Objectives**

Identify and describe buds and bud anatomy.  
Differentiate between one-season old vine wood and older wood.  
List and describe root development and bud and shoot stages according to the modified Eichhorn Lenz (EL) system use to describe grape development stages.

Differentiate between trunk, cordon, shoots, suckers, fruiting spurs, and renewal spurs.

**10. Classify trellis systems.**

**Learning Objectives**

Determine linear feet of cordon per acre and per vine.  
Identify high tension trellis wire, guy wire, and braided cable.  
Calculate number of posts per acre determined by trellis and vine spacing.  
Draw details of 4 popular trellis configurations.  
Differentiate between 8 trellis configurations.

**11. Summarize training practices.**

**Learning Objectives**

Identify steps for trunk and cordon selection.  
Identify proper training procedures.

**12. Describe economic factors involved in vineyard feasibility.**

**Learning Objectives**

Determine establishment costs.  
Analyze return on investment.  
Perform a market survey.

**SCC Accessibility Statement**

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.