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Grape and Wine Education for the 21st Century

VIN 111 - Introduction to Viticulture and Vineyard Establishment

Date: January 29 – May 11, 2018

VESTA Course No.: VIN 111

Course Name: Intro. to Viticulture and Vineyard Estb.

Instructor: Joseph Geller

Office Hours: Virtual, by appointment, phone, e-mail

Semester: Spring 2018

Course Credit: 3 Hours

Delivery: Online

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Course Description: 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 16 hours of hands-on experience will be scheduled in area vineyards.

Course Rationale: The purpose of this course is to present a survey of the best principles and practices of successful vineyard establishment and maintenance. The content is structured to make the student think about those factors they will encounter during their careers that will influence their decisions in relationship to vineyard management.

Prerequisites: None

Next Course in Sequence: VIN 212

Course Objectives

Through lectures, facilitated discussions, quizzes and written assignments the student will:

- Demonstrate the use of a Gantt diagram to schedule seasonal vineyard tasks.
- Name and describe four major species of grapes commercially viable in your area.
- Name and describe four American-hybrid varieties.
- Identify sources and availability of desirable varieties 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.
- Establish differences between common commercial varieties.
- Differentiate between French-American hybrids and *V. vinifera*.
- Determine disease susceptibility of commercial grape varieties in specific regions.
- Identify and describe six major weeds.
- Identify and describe six major grape diseases.
- Describe three pest control methods.
- Describe organic control methods.

- List the requirements of the state organic certification program in your state.
- Demonstrate the proper interpretation of pesticide labels as they apply to legal and civil issues.
- Determine total length of fruiting zone per acre for most common row spacing and trellises.
- 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.
- Demonstrate the ability to read a compass and topographical maps
- Identify magnetic and geographical north
- Identify drainage patterns.
- Produce a vineyard plan that includes layout diagram, number of vines, hardware, and training trellis.
- Evaluate slope and aspect.
- Identify and describe three modern trellis systems.
- Identify and describe three outdated trellis systems.
- Compare and contrast spring and fall budding practices.
- Demonstrate proficiency in stock selection, proper planting methods, and post-planting care.
- Identify and describe buds and bud anatomy.
- Differentiate between one-season old vine wood and older wood.
- List and describe bud and shoot stages
- Differentiate between trunk, cordon, shoots, suckers, fruiting spurs, and renewal spurs.
- Determine feet of cordon per acre.
- Determine feet of cordon per vine.
- Identify high tension trellis wire, guy wire, and braided cable.
- Calculate number of posts per acre.
- Draw details of 4 popular trellis configurations.
- Differentiate between 8 trellis configurations.
- Identify vine structure
- Identify proper training procedures
- Determine establishment costs.
- Analyze return on investment.
- Perform a market survey.

Textbooks

Students are responsible for acquiring the textbook and required materials.

1. *Winter Injury to Grapevines and Methods of Protection*. (June 2007). T.J. Zabadal et al., Michigan State University Extension Bulletin E2930.
2. *Wine Grape Production Guide for Eastern North America*. (2008). T.K. Wolf, Natural Resource, Agriculture & Engineering Service (NRAES) Cooperative Extension.
ISBN-13: 978-19-3339-512-8

Course Schedule and Outline of Topics

Week — Dates	Live Class Meeting Dates	Lecture Topics
1 01/29 - 02/04	01/29	Course Orientation
2 02/05 - 02/11	02/05	Vocabulary History of Grapes and Wine Geographical Distribution Climate, Degree Days and Growing Regions
3 02/12 - 02/18	02/12	Vine Structure Yearly Cycle of Vine Growth
4 02/19 - 02/25	02/19	<i>Vitis</i> Species, Rootstocks, Cultivars and Clones
5 02/26 - 03/04	02/26	Vineyard Soils
6 03/05 - 03/11	03/05	Trellis and Vine Support Systems Vine Training and Pruning Exam 1
7 03/12 - 03/18	03/12	Vineyard Development Yearly Farm Plan
8 03/19 - 03/25	03/19	Vine Physiology Berry Development
9 03/26 - 04/01	03/26	Vine Propagation
10 04/02 - 04/08	04/02	Vineyard Irrigation and Soil Moisture Monitoring
11 04/09 - 04/15	04/09	Canopy Management and Canopy Assessment Exam 2
12 04/16 - 04/22	04/16	Maturity Determination and Harvest
13 04/23 - 04/29	04/23	Vine Pests and Diseases Vine Pest and Disease Control Measures Integrated Pest Management
14 04/30 - 05/06	04/30	Vine Mineral Nutrition Methods to Improve Grape Quality Sustainable Agriculture Practices, Organic, Biodynamic Farming
15 05/07 - 05/11	No live class meeting	Final Exam

The instructor reserves the right to adjust the schedule as necessary.

Instructional Methods

This is an online course with a synchronous component. An online course site hosted by Missouri State University Blackboard system is used to provide announcements, lectures, notes, supplemental printed and web-based materials, and assignments to students. It also serves as a central point for interaction/communication between the instructor and the students.

Live Class Meeting

There will be a live class meeting every **Monday from 6:00 to 7:00 p.m. Central Time** via the **Zoom** web conferencing system. Participation to the live class meetings is required. This is an opportunity for the instructor to go over weekly topic highlights and for students to interact with the instructor and fellow students through questions and discussions. Students are expected to be prepared to ask questions and actively participate in the discussions.

Participation in the live class meeting is crucial, and a participation grade is assigned. It is the student's responsibility to notify the instructor in advance if he/she has to miss a class. Students who missed a class meeting are required to listen to the live class recording and submit their question and answer for that session by the deadlines.

Field Practicum

There is a required **16-hour practicum** component to this course. Each student is required to identify a vineyard and mentor that would be willing to allow the student to put into practice the theory and skills learned in class. After identifying the mentor, the student should complete the online Field Practicum Site Form (available on the online course site and the VESTA website) by the end of the second week of the semester. Upon receipt of the form, the VESTA office will send a packet of information to the mentor explaining the field practicum, the skill sets to be completed by the student, and the mentor's role in the field experience.

The practicum hours should be completed within the semester. If it is not possible due to regional differences, the student should inform the instructor in advance and work out a schedule for completing the practicum hours. The practicum is not completed until the VESTA office receives a summary practicum evaluation from the mentor.

Course Assignments

Course assignments include session readings (online lectures/presentations and print-based materials), posting and responding to session discussion questions, and three exams. Students are also required to keep an online reflective journal for practicum.

Session Reading Assignments: Online lectures/presentations and web/print-based materials will be posted on the online course site. Students should view the prerecorded weekly lecture videos and complete the weekly reading assignments *before* each live class meeting.

Discussion Board Postings: Students are to post session question(s) based on lectures and readings on the online course site **Discussion Board** one hour before the live class meeting, and post responses to their own question(s) one hour before the following session's live class meeting. Late postings will not be accepted, no points will be given for questions/answers posted after the due date and time.

Practicum Journal: Students will be required to keep an online journal for the 16-hour practicum activities. Journal entries will be entered using the journal tool provided on the online course site. Instructions are provided on the online course site.

Exams: There will be three exams in this course. Exam 1 will cover topics studied in sessions 1-5; Exam 2 will cover topics studied in sessions 6-10; the Final Exam is not cumulative and will cover topics studied in sessions 11-15. Students will take the exams online through the course site.

Expectations and Instructor Feedback

Students should participate in the weekly live class meetings. It is also the students’ responsibility to check the online course site on a regular basis, be aware of the required activities and assignments, and adhere to the deadlines. This will ensure a successful learning experience.

The instructor will make every effort to respond to student questions and complete assignment/exam grading in a timely manner.

Session Learning Routine

After the first live session meeting, students should follow the session routine below:

- Complete each reading assignments and view the video lecture or presentation posted in the online course site before the day of the designated session.
- Based on the readings and the lecture/presentation, post at least one question which you consider important to the topic(s) or needs further clarification, to the session forum in the online course site Discussion Board by **5:00 p.m. Central Time** on day of the designated session.
- Join the live class meeting from **6:00 to 7:00 p.m. Central Time**. Be prepared to participate in class discussions on topic-related questions and practicum experiences.
- After the live class meeting, you should reply to your own question(s) posted in the session discussion forum based on what you have learned about the topic(s) by **5:00 p.m. Central Time on the day following the live class meeting**. Feel free to respond to questions posted by your fellow students after they have posted their answers.
- Start the learning routine over again for the following week.

Late Assignments

Late postings will not be accepted, no points will be given for questions/answers posted after the due date and time. Students should work ahead instead of making up.

Grading

- 90 – 100% = A
- 80 – 89.9% = B
- 70 – 79.9% = C
- 60 – 69.9% = D
- Below 60% = F

Percentage Weight of Student Performance		
Activity	Percentage	Points
Examinations (3 x 100 points each)	49%	300
Weekly Session Postings	23%	140*
Live Class Participation	11%	70**
Practicum Journal	17%	105
Total	100%	615

* 5 points for posting questions, and 5 points for posting answers per session for 14 sessions (session 2 to 15).

** 5 points for live class meeting participation per session for 14 sessions (session 2 to 15).

Missouri State University Institutional Policies

Withdrawing from the Course

It is the students' responsibility to see that all requirements are completed within the semester timeframe so grades can be issued. Should it become necessary to withdraw, it is the student's responsibility to do so according to the university guidelines found at: <http://wp.missouristate.edu/recreg/withdrawl-procedures.htm>

**Students planning to withdraw from this course must also complete the VESTA Withdrawal/Change of Schedule form and submitting to the VESTA office.*

Online Student Academic and Student Support Resources

Missouri State University-West Plains provides a full-range academic and student support for online students. To learn more about specific academic and student support and how to access the resources, go to <http://online.wp.missouristate.edu/>

Attendance Policy

Missouri State University believes that students must attend class in order to achieve the best learning results. In the case of VESTA online courses, attendance is defined as active participation in the form of attending synchronous class meetings (if applicable), completing reading/writing/testing assignments by assigned deadlines, and maintaining regular communication with course instructor via the online course site and communication tools designated by the instructor. For courses with a practicum/workshop component, students must participate and complete the number of hours of practical experience required. Instructors may assign attendance grade as part of course grade if they choose to do so. MSU expects instructors to be reasonable in accommodating students whose absence from class resulted from: 1) participation in University-sanctioned activities and programs; 2) personal illness; or 3) family and/or other compelling circumstances. The University's attendance policy can be found at:

<http://www.missouristate.edu/registrar/catalog/attendan.html>

Make-up Policy and Special Instructions

The exams can be made up only in the event of an excused absence where the instructor has prior knowledge of the absence. Allowance of make-up tests will be at the discretion of the instructor and will be taken on the date of the student's return to class.

Statement of Nondiscrimination

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Institutional Equity and Compliance, Park Central Office Building, 117 Park Central Square, Suite 111, 417-836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head. Please visit the OED website at:

<http://www.missouristate.edu/equity/>

Academic Integrity Statement

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the university's student honor code, Student Academic Integrity Policies and Procedures, available at: <http://www.missouristate.edu/academicintegrity/> and also available at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this will also be notified by email.

Student Disability Accommodation Policy and Procedures

To request academic accommodations for a disability, contact the Director of [Disability Services](#), Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY), or www.missouristate.edu/disability. Students are required to provide documentation of disability to Disability Services prior to receiving accommodations. Disability Services refers some types of accommodation requests to the [Learning Diagnostic Clinic](#), which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the Director of the [Learning Diagnostic Clinic](#), (417) 836-4787, <http://psychology.missouristate.edu/lcd>.

Religious Accommodation

The University may provide a reasonable accommodation based on a person's sincerely held religious belief. Students who expect to miss classes, examinations, or other assignments as a consequence of their sincerely held religious belief shall be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a *Request for Religious Accommodation Form* to the instructor by the end of the third week of a full semester course or the end of the second week of a half semester course. For more information see: http://www.missouristate.edu/policy/op1_02_1_religiousaccommodation.htm