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Grape and Wine Education for the 21st Century

VIN 111 - Introduction to Viticulture and Vineyard Establishment

Date: **January 25 – May 7, 2021**

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Office Hours: Virtual, by appointment, phone, email

Semester: **Spring 2021**

Host: Missouri State University

Host Course No.: VIN111-SP21-20247-WP

Course Credit: 3 Hours

Delivery Format: Online

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.
- Understand the types of varieties commercially grown in various growing regions.
- Determine disease susceptibility of commercial grape varieties in specific regions.
- Understand pest management strategies including fungus, weeds, and insect
- Take a soil sample according to the recommendations of the Soil Testing Lab in a specified state and measure pH on samples from around a specified vineyard.
- Describe the process of implementation of a soil fertility plan, including timing and application methods.
- Produce a vineyard plan that includes layout diagram, number of vines, hardware, and training system.
- Evaluate site selection concepts such as slope and aspect.
- Identify and describe three modern trellis systems.
- Identify and describe three outdated trellis systems.

- Demonstrate proficiency in stock selection, proper planting methods, and post-planting care.
- Identify and describe buds and bud anatomy.
- Differentiate between trunk, cordon, shoots, suckers, fruiting spurs, and renewal spurs.
- Identify proper training and canopy management procedures
- Determine establishment costs and analyze return on investment.

Course Schedule and Outline of Topics

Week — Dates	Monday Live Class Meeting Dates	Lecture Topics
1 01/25 - 01/31	01/25	Vocabulary History of Grapes and Wine Geographical Distribution Climate, Degree Days and Growing Regions
2 02/01 - 02/07	02/01	Vine Structure Yearly Cycle of Vine Growth
3 02/08 - 02/14	02/08	<i>Vitis</i> Species, Rootstocks, Cultivars and Clones
4 02/16 - 02/21	—	No live class - President's Day Vineyard Soils
5 02/22 - 02/28	02/22	Trellis and Vine Support Systems Exam 1
6 03/01 - 03/07	03/01	Vine Training and Pruning
7 03/08 - 03/14	03/08	Vineyard Development Yearly Farm Plan
8 03/15 - 03/21	03/15	Vine Physiology Berry Development
9 03/22 - 03/28	03/22	Vine Propagation Exam 2
10 03/29 - 04/04	03/29	Vineyard Irrigation and Soil Moisture Monitoring
11 04/05 - 04/11	04/05	Canopy Management and Canopy Assessment
12 04/12 - 04/18	04/12	Maturity Determination and Harvest
13 04/19 - 04/25	04/19	Vine Pests and Diseases Vine Pest and Disease Control Measures Integrated Pest Management
14 04/26 - 05/02	04/26	Vine Mineral Nutrition Methods to Improve Grape Quality Sustainable Agriculture Practices, Organic, Biodynamic Farming
15 05/03 - 05/07	—	No live class – Final Exam Final Exam

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

Required Textbooks

Zabadal, T. J., Dami, I. E., Goffinet, M. C., Martinson, T. E., & Chien, M. L. (2007). *Winter Injury to Grapevines and Methods of Protection*. Michigan State University Extension Bulletin E2930. Available from the MSU Extension Bookstore (\$15.00) at http://shop.msu.edu/product_p/bulletin-e2930.htm or www.doublevineyards.com or the vendor of your choice.

Wolf, T. K. (2008). *Wine Grape Production Guide for Eastern North America*. Natural Resource, Agriculture & Engineering Service (NRAES) Cooperative Extension. ISBN-13: 978-19-3339-512-8. Available from <https://doublevineyards.com> (\$99.00) or the vendor of your choice.

Dami, I., Bordelon, B., Ferree, D. C., Brown, M., Ellis, M. A., Williams, R. N., & Doohan, D. (2005). *Midwest Grape Production Guide*. Bulletin 919. Publisher: Ohio State University Extension. ASIN: B002SE1E6K This is a free download at: https://plantpathology.ca.uky.edu/files/mw_grape_productn_b919.pdf

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 Meetings and Participation

There will be a live class meeting every **Monday from 6:30 to 7:30 p.m. Central Time** via the **Zoom** web conferencing system. Participation in 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 every discussion.

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.

It is the student's responsibility to notify the instructor in advance if he/she must miss a class. The recording of each live class will be available within 24-48 hours after each session for those who miss a live class.

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.

Field Practicum Journal

In order to monitor the success of the field practicum portion of the course, students will keep an online journal, detailing their experiences. Journal entries will be posted using the **Journal Tool** provided on the online course site. Instructions are provided on the online course site.

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 at least one question based on lectures and readings on the online course site **Discussion Board** by **noon** on the day of the live class meeting. The instructor will address these questions during the live class meeting. Late postings will not be accepted, no points will be given for questions/answers posted after the due date and time.

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.

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

Student grades will be determined based on their total points earned in the class. The table below outlines the total points possible and their percentage weight.

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).

Grade calculation: total points earned ÷ total points possible; then using the following scale to determine final letter grades:

90 – 100% = A	80 – 89.9% = B	70 – 79.9% = C	60 – 69.9% = D	Below 60% = F
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INSTITUTIONAL POLICIES ON FOLLOWING PAGE

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 submit it 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 Grading Policy

Faculty have the choice to utilize either the standard grade policy or the plus/minus grading option but are required to indicate their grading scale on their syllabus. The University's plus/minus grading system can be found at <http://wp.missouristate.edu/recreg/grade-policies.htm>

Title IX Policy

Missouri State University does not discriminate on the basis of sex in the education program or activity that it operates, including in admission and employment. Concerns regarding discrimination on the basis of sex, including sexual harassment, should be referred to Jill Patterson, Title IX Coordinator, Carrington 205, 901 S. National Ave., Springfield, MO 65897, 417-836-8506, or jillpatterson@missouristate.edu. MSU has adopted a grievance procedure policy for the prompt and equitable resolution of allegations of sexual discrimination, including sexual harassment. This policy is available at the [Title IX website](#). Individuals may report an allegation of sex discrimination, file a complaint of sexual discrimination, or file a formal complaint of sexual harassment by contacting MSU's Title IX Coordinator.

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 policy.

Statement on Disability Accommodation

If you are a student with a disability and anticipate barriers related to this course, it is important to request accommodations and establish an accommodation plan with the University. Please contact the Disability Resource Center (DRC) at the [Disability Resource Center website](#), Meyer Library, Suite 111, 417-836-4192, to initiate the process to establish your accommodation plan. The DRC will work with you to establish your accommodation plan, or it may refer you to other appropriate resources based on the nature of your disability. In order to prepare an accommodation plan, the University usually requires that students provide documentation relating to their disability. Please be prepared to provide such documentation if requested. Once a University accommodation plan is established, you may notify the class instructor of approved accommodations. If you wish to utilize your accommodation plan, it is suggested that you do so in a timely manner, preferably within the first two weeks of class. Early notification to the instructor allows for full benefit of the accommodations identified in the plan. Instructors will not receive the accommodation plan until you provide that plan, and are not required to apply accommodations retroactively. 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. In making this determination, the University reviews a variety of factors, including whether the accommodation would create an undue hardship. The accommodation request imposes responsibilities and obligations on both the individual requesting the accommodation and the University. 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