



HRT 336 SS-2025

Viticulture and Berry Production – 2 Credits



Description: The course will emphasize modern concepts used to produce commercial grapes, blueberries, strawberries, blackberries, raspberries, and minor berry crops through classroom discussion and hands-on experiences. Students will develop an understanding of the growth, development, and physiology of these species as a basis for cultural techniques. The laboratory practicum will provide experiential learning opportunities related to planting, pruning, training, and establishment of these crops.

https://www.canr.msu.edu/courses/hrt_336_viticulture_and_berry_production

University Policies and Resources:

Academic Integrity

Students are to abide by policies set in place by MSU regarding academic integrity, other issues of dishonesty, and/or poor judgment. Students will be penalized or disciplined in accordance with MSU policies in all instances where appropriate. <https://ossa.msu.edu/academic-integrity>

Students with disabilities

Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at <https://www.rcpd.msu.edu/>. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation (“VISA”) form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.).

Attendance

Attendance is defined as physical attendance or participation in an academically related activity such as submission of an assignment, an examination, participation in a study group or an online discussion, etc. Instructors who do not take attendance may utilize key assessment points (e.g. projects, papers, mid-term exams, and discussions) as benchmarks for participation. Students may be dropped from a course for non-attendance by a departmental administrative drop any time after the fourth-class period, or the fifth class day of the term of instruction, whichever occurs first. In compliance with federal regulations governing financial aid and veteran’s education benefits, instructors are required to report students who stop attending or who have never attended class. After the first week of classes, through the middle of the term of instruction, instructors who identify a non-attending student should notify their departmental office. Upon receiving a report of non-attendance, departmental representatives are encouraged to initiate an administrative drop. <https://reg.msu.edu/ROInfo/Notices/Attendance.aspx>

Artificial Intelligence

Use of artificial intelligence-based software, such as ChatGPT, is becoming more widespread in

the classroom. While ChatGPT appropriately aids the learning experience in some contexts, this type of software can also detract from student's learning experience. In this course, we expect that students will not use ChatGPT or similar AI software for the writing assignment. <https://provost.msu.edu/news-and-updates/2023-student-AI-20230926>

Diversity and Inclusion

Our aim is to foster a learning environment where every student feels valued, supported, and inspired to achieve individual and common goals with an uncommon will. This includes providing opportunity and access for all people across differences of race, age, color, ethnicity, sexual orientation, gender identity, religion, national origin, migratory status, disability/abilities, political affiliation, veteran status, and socioeconomic background. <https://www.canr.msu.edu/diversity/dei-statement>

Course Learning Objectives:

- Prepare students for commercial production of grape and berry crops.
- Provide students with an understanding of fundamental growth processes, and how these are manipulated through cultural practices to optimize the commercial production of grapes and berries.
- Demonstrate the unique horticultural aspects (cultivars, pruning, fertility, crop load) of managing vine, bush, and cane fruit crops.
- Introduce the diversity of diseases and pests that commonly reduce fruit yield and quality.
- Emphasize concepts in canopy management to improve wine and juice grape yield and quality, including vineyard design, trellis systems, and pruning and training systems.

Lecture: Wednesday, Feb. 19 to April 23, 1:50-2:40 pm, B109 Plant and Soil Science Building

Lab: Wednesday, Feb. 19 to April 23, 3:00-4:50 pm, B109 Plant and Soil Science Lab OR Horticulture Teaching and Research Center (HTRC) on College Road. Students are expected to find their own transport to HTRC. When labs take place at HTRC, we will always start by meeting at the parking lot, and then proceed to the field. Students should be prepared to work outside – dress according to the weather conditions (coat, raincoat, hat, boots, gloves, etc.) and to the lab taking place.

Lab Assignment: For all labs, we will have a Lab Assignment for you to complete as an individual. The assignment sheet will be filled out and returned by the end of the lab. For labs 1, 2, 3, and 6, this will involve completing a short worksheet, which will be turned in by the end of class for consideration of full credit. For the pruning labs 4, 5, 7, and 8, obtaining full credit for the Lab Assignment will involve a short pruning demonstration for the instructor by the end of the lab.

Textbook: None

Field trip and individual writing assignment: On April 9th, we will take an all-day field trip to visit two small fruit growers. We will depart from campus at 8 am and return to campus in the late afternoon (4-5 pm). Each student should make appropriate arrangements at the beginning of the

semester to ensure attendance and participation. Each student will provide an individual writing assignment, worth 20% of the final grade. The writing assignment will be based on the field trip and will include a detailed description of what they saw and the significance of what they saw. Students are expected to ask questions to growers regarding the agronomic importance of cultivation techniques, and major abiotic and biotic (insect pests, pests, and diseases) impacting production systems. The writing assignment should be four or more pages of single-space text (New Times Roman, 12 pt. font), with an optional additional page for pictures taken on the trip. The assignment will be due during lecture on Wednesday, April 23rd (two weeks after the field trip), by 5 pm.

Exams: 60% of the class grade will consist of two exams: one midterm and one final. Each exam will cover approximately 50% of the course material.

Grading:

Assignment	Maximum points	Percent of total points
Lab assignments (8)	50 (~6.25 pts. each)	20%
Field trip writing assignment	50	20%
Exam 1 (midterm)	75	30%
Exam 2 (final)	75	30%
TOTAL	250	100%

% of total points	Grade Point
90	4.0
85	3.5
80	3.0
75	2.5
70	2.0
65	1.5
60	1.0
<60	0.0

HRT 336 Weekly Course Schedule 2025				
Date	Week	Topics	Location	Instructor
19 Feb	1	Lecture 1: Introduction to viticulture & berry production	B109 PSSB	Vander Weide
		Lab 1: Phenology assessment of berry crops		
26 Feb	2	Lecture 2: Grape culture and physiology	PSSB B109/ HTRC	Sabbatini
		Lab 2: Assessing grapevine cold hardiness		
5 Mar	3	SPRING BREAK – NO CLASS		
12 Mar	4	Lecture 3: Strawberry culture and physiology	PSSB B109	Vander Weide
		Lab 3: Effect of temperature on strawberry growth		
19 Mar	5	Lecture 4: Grape pruning and training	PSSB B109/ HTRC	Sabbatini
		Lab 4: Pruning grapevines		
26 Mar	6	Lecture 5: Vineyard management	PSSB B109/ HTRC	Sabbatini
		Lab 5: Pruning and training grapevines		
2 Apr	7	MIDTERM EXAM	B109 PSSB	Vander Weide / Bardenhagen
		Lecture 6: Grape and berry marketing		
9 Apr	8	ALL DAY FIELD TRIP*		Vander Weide
16 Apr	9	Lecture 7: Blueberry physiology and culture	B109 PSSB/ HTRC	Vander Weide
		Lab 7: Pruning blueberries		
23 Apr	10	Lecture 8: Bramble physiology and culture	B109 PSSB	Vander Weide
		Lab 8: Minor Berries and pruning brambles	HTRC	
30 Apr	11	FINAL EXAM	B109 PSSB	Vander Weide
* All day field trip to commercial farms. See Field Trip section of the Syllabus for further details.				