



VIN 211 – Integrated Pest Management Syllabus

Date: February 5 – April 27, 2007

Semester: Spring, 2007

Course Name: Integrated Pest Management

Course No.: VIN 211

Room: Online

Instructor: John Avery

Course Credit: 2 Hours

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Course Description: Effective grape production depends on the grower developing a system of grape management that is appropriate for each vineyard. Decisions need to be made for how to manage all of the normal cultural practices such as planting, fertility, harvesting, and pruning as well as managing the insect, disease, and weed problems that occur either regularly or sporadically. The information in this course will address management issues related to common, expected pest problems as well as the occasional appearance of minor pest problems.

Prerequisites: None

Next Course in Sequence: VIN 213

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

- Explain differences between cultural, biological, and chemical control.
- Describe reasons for and methods of reducing pesticide use.
- Describe basic pest biology of bud and fruit insect pests.
- Describe basic pest biology of leaf and root insect pests.
- Describe which pests are considered minor, absent, or infrequent insect pests of grapes.
- Identify insect pests of grapes.
- Explain how to effectively select insecticides for management of grape insect pests while considering factors such as efficacy, cost, safety, and proper use.
- Explain how non-chemical controls can be used to manage grape insect pests.
- Explain the importance of monitoring and scouting.
- Describe when weed management of vines is most critical.
- Describe the recommended type of between row vegetation.
- Describe non-herbicide alternatives to weed control.
- Identify grape herbicides and appropriate use.
- Develop a sustainable weed management plan.
- Identify economically important weed species in your area.

- Explain and describe viral and bacterial diseases
- Explain and describe disease vectors
- Determine which disease is causing damage based on symptoms of grape fruit, leaves, and vines.
- Explain how weather affects the development of grape diseases.
- Explain which stage of vine development is susceptible or not susceptible to particular diseases.
- Explain the difference between protectant and systemic fungicides.
- Explain how to select the appropriate fungicide for management of particular diseases.
- Explain how cultural controls can be used to manage diseases.
- Describe why some pesticides are more likely and some are less likely to select for resistant pest populations.
- List ways to alternate insecticides in order to manage for resistance.
- Describe about the different ways insect populations can develop resistance to insecticides.
- Describe which fungicides are prone to select for disease-resistant populations of pathogens and which have low or no risk for resistance development.
- Relate weed population change to management strategies
- List and describe organic insect, disease, and weed management practices.
- Determine which fungicides and insecticides are organic and which are not.
- Explain how pheromone mating disruption works and how it can be used to manage populations of grape berry moth.
- Identify and describe bird, deer, and vertebrate pest control options and which are most effective.

Text and supplemental materials:

Midwest Commercial Small Fruit & Grape Spray Guide 2006

<http://www.vesta-usa.org/PDF%20Documents/Order%20Form.pdf>

Growing Grapes in Missouri

<http://mtngry.missouristate.edu/Publications/GGIMpub.htm>

Course assignments that are potential portfolio items: Written assignments, course project and handout exercises.

Outline of Subject Content:

PROPOSED SCHEDULE

Week 1: General overview of Grape IPM

Week 2: Insects- bud and fruit pests

Week 3: Insects- leaf, root, and typically minor pests

Week 4: Insecticides

Week 5: **Quiz**, Weeds, Herbicides, 2,4-D injury

Week 6: Diseases- fruit rots, Downy mildew, Powdery mildew
Week 7: Diseases- Anthracnose, Crown gall, Eutypa, and Phomopsis
Week 8: **Quiz**, Pesticide resistance, fungicides
Week 9: Organic pest management, Pesticide alternatives
Week 10: Management of birds, deer, and other vertebrate pests
Week 11: **Final project**
Week 12: **Exam**

Instructional Methods:

Online instruction, discussions, and supplemental printed and web-based material will be used to present the subject matter. Written assignments and other projects will be used to reinforce concepts.

Written Assignments:

All written assignments will be typed. Spelling and grammar are extremely important in professional writing and papers will be scored accordingly.

Grading:

Grading is on a simple point system as follows:

90-100	A
80-89	B
70-79	C
60-69	D

The percentage weight of student performance will be:

Quizzes = 20% (10% each)
Exam = 30%
Discussion Board Postings 10%
Final project = 40%

Incomplete grades are not given in this class. Should it become necessary to withdraw, it is the student's responsibility to do so according to the guidelines in the MSU-West Plains student handbook.

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.

Accommodations for Students with Special Needs:

Missouri State University complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Students with disabilities who need special accommodations should make their request in the following way: (1) speak with the instructor after class or during office hours about your disability or special needs related to work in the class and (2) contact Student Services and ask to speak to the ADA officer.

Nondiscrimination Policy Statement

Missouri State University is a community of people with respect for diversity. The University emphasizes the dignity and equality common to all persons and adheres to a strict nondiscrimination policy regarding the treatment of individual faculty, staff, and students. In accord with federal law and applicable Missouri statutes, the University does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, disability, or veteran status in employment or in any program or activity offered or sponsored by the University. In addition, the University does not discriminate on any basis not related to the applicable educational requirements for students or the applicable job requirements for employees. The University maintains a grievance procedure incorporating due process available to any person who believes he or she has been discriminated against. Missouri State University is an Equal Opportunity/ Affirmative Action employer. Inquiries concerning the grievance procedure, Affirmative Action Plan, or compliance with federal and state laws and guidelines should be addressed to the Equal Opportunity Officer, Siceluff Hall 296, 901 South National, Springfield, MO 65804, (417) 836-4252.

Approved by Board of
Governors
December 13, 2002

Student Disability Accommodation Policy and Procedures

Within the guidelines set forth in this policy, Missouri State University is committed to providing an accessible and supportive environment for students with disabilities. Equal access for qualified students with disabilities is an obligation of the University under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Missouri State University does not discriminate on the basis of disability against otherwise-qualified individuals in any program, service or activity offered by the University. The University is committed to insuring that no otherwise-qualified individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids or other appropriate services; however, accommodations cannot result in an undue burden to the University or fundamentally alter the requirements essential to a program of instruction.