South Central College

VITI 1211 Integrated Pest Management

Course Outcome Summary

Course Information

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)

Total Credits 2

Total Hours 32

Types of Instruction

Instruction Type	Credits/Hours
Lecture	2/32

Pre/Corequisites

None

Institutional Core Competencies

Civic Engagement and Social Responsibility - Students will be able to demonstrate the ability to engage in the social responsibilities expected of a community member.

Course Competencies

1. Explain integrated pest management basic concepts.

Learning Objectives

Explain differences between cultural, physical, biological, and chemical control.
Describe reasons for and methods of reducing pesticide use.
Calibrate a sprayer to achieve the desired pest control goals.
List pesticide license/certification requirements for their location.
Explain and outline a good neighbor program.
Discuss the need for detailed record keeping of all pesticide usage.
Develop a procedure for detailed record keeping of all pesticide usage.

2. Paraphrase basic grape insect pest biology, identification, and management.

Learning Objectives

Describe basic pest biology and life cycle of bud and fruit insect pests.
Describe basic pest biology and life cycle of leaf and root insect pests and nematodes.
Describe which pests are considered minor, absent, or infrequent insect pests of grapes in a given location.
Identify major insect pests of grapevines in a given location.
Explain the importance of monitoring and scouting.
Identify beneficial insects and life cycles.
Explain how to effectively select insecticides for management of grapevine insect pests while considering factors such as efficacy, cost, safety, and proper use.
Explain how cultural, physical, and biological controls can be used to manage grapevine insect pests.

3. Relate basic weed management practices and herbicide selection.

Learning Objectives

Identify economically important weed species in a given location.
Describe when weed management of vineyards is most critical.
Develop a sustainable weed management plan.
Describe non-herbicide alternatives to weed control.
Identify vineyard herbicides and appropriate use.
Describe the recommended type of vineyard floor management.

4. Recognize the major diseases of grapevines and their management.

Learning Objectives

Explain and describe viral, fungal, and bacterial diseases.
Explain and describe disease vectors.
Determine which disease is causing damage based on symptoms of grape berries, leaves, and vines.
Explain how weather affects the development of grapevine diseases.
Indicate which stage of vine development is susceptible or not to specific diseases.
Explain the difference between protectant and systemic fungicides.
Select the appropriate fungicide for management of specific diseases.
Discuss how cultural and biological techniques can be used to manage diseases.

5. Identify the basics of pesticide resistance management.

Learning Objectives

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 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.

6. Express the importance of reading and following the pesticide label instructions.

Learning Objectives

List and interpret all components of a pesticide label.
Describe correct application of pesticides based on label interpretation.

7. Recognize organic pest management and use of pesticide alternatives.

Learning Objectives

List and describe organic insect, disease, and weed management practices.
Determine which fungicides and insecticides are allowable under organic certification.
Explain how pheromone mating disruption works and how it can be used to manage populations of Lepidoperous pests.

8. Describe how to manage vertebrate pests.

Learning Objectives

Identify and describe vertebrate pest control options.
Explain which pest control options are most effective.

SCC Accessibility Statement

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