

Common Course Outline

HORT 225

Pesticide Use and Safety

2 Semester Hours

The Community College of Baltimore County

Description

Pesticide Use and Safety

Prepares the horticultural professional for the examination for pesticide application certification; covers principles of pest control, pesticides, laws and regulations, pesticide labeling, pesticides and human health, personal protective equipment, pesticides and the environment, handling pesticides, pesticide emergencies and pesticide alternatives.

Prerequisite: (ENGL 051 or LVE 1) or (ESOL 051 or LVE 1), (RDNG 051 or LVR 1), (MATH 081 or LVM 1)

Overall Course Objectives

Upon completion of this course the student will be able to:

- A. Discuss chemicals that are considered to be pesticides.
- B. List and evaluate types of pesticides.
- C. Comprehend pesticide terminology.
- D. Identify appropriate pesticide reference and study materials.
- E. Understand the types and uses of pesticides: insecticides, fungicides, herbicides, others
- F. Summarize the pesticide laws and regulations:
 - The Federal Pesticide Law (FIFRA) and (FQPA)
 - The Maryland Pesticide Law
 - Local Pesticide Laws
- G. Understand the pesticide registration process including: the pesticide registration time line, the discovery phase, the testing phase, the submission of data, and EPA evaluation and registration.
- H. Discuss pesticide toxicology including:
 - Definitions
 - Types of toxicities: acute, delayed, and chronic, plus allergic reactions
 - What are LD/50's
 - The fate of pesticides in the human body
- I. Discuss pesticide health and safety including:
 - The pesticide label
 - Personal protective equipment
 - How pesticides enter the body
 - The fate of pesticides in the body
 - Pesticides emergencies
- J. Summarize the proper handling of pesticides including:
 - Pesticide application equipment
 - Pesticide calibration and calculations
 - Pesticide transportation
 - Pesticide storage
 - Pesticide disposal

- K. Discuss pesticides and the environment including:
 - Alternative pest control methods
 - How pesticides get into the environment: drifts, runoff, leaching
 - Effects of pesticides on the environment
 - Non-target animals and plants
 - Groundwater
 - The Chesapeake Bay
 - The fate of pesticides in the environment: absorption, degradation, transfer
- L. Discuss pesticides and the public including:
 - The benefit vs. risk equation
 - Pesticide risks - perception vs. reality
 - Pesticides and the media
 - Pesticide detection methods
- M. Recognize the future of pest control including:
 - Integrated Pest Management
 - Advances in biological pest control

Major Topics

1. Laws and regulations governing the use, safety, and application of pesticides.
2. Principles of Integrated Pest Management
3. Environmental and health concerns associated with the use of pesticides
4. Evaluating pesticides on the basis of method of application, cost, safety, environmental and health concerns.
5. Communicating effectively with nursery, greenhouse, and landscape professionals, extension agents, government officials, and customers.
6. Using library resources to complete course assignments.

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member, but will include the following:

1. 2 Written Exams
2. Attendance and Participation
3. 1 Saturday Class Practical