

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: HRT 125

Credits: 3

Course Title: Chemicals in Horticulture

Course Description: Emphasizes basic chemical principles and their application to horticulture. Introduces principles of inorganic and organic chemicals. Studies chemical activities of insecticides, fungicides, herbicides, fertilizers, and growth regulators. Provides students an opportunity to test for their Commercial Pesticide Applicators License, administered by VDACS, at the end of the course. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

General Course Purpose: Students will learn pesticide safety practices as well as applicable pest management techniques in order to prepare for the state certification exams. The ultimate outcome of the class is to become a commercial pesticide applicator in Categories 3A and 3B Ornamentals and Turf (as designated by the Virginia Pesticide Control Board).

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to:

- a. Identify the principles of pesticide safety;
- b. Identify the regulations affecting commercial pesticide applicators in Virginia;
- c. Identify and implement management techniques for ornamental and turf pests; and
- d. Calculate square footage and perform other required calibration math.

Major Topics to Be Included:

- a. Pesticide regulations in Virginia labeling and formulations
- b. IPM, environmental concerns
- c. Mixing, loading, and applying pesticides
- d. Personal protection
- e. Spill management
- f. Ornamental pest management
- g. Turf pest management

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