

Course Outline of Record

1. Course Code: AGPS-032
2. a. Long Course Title: Pesticide Laws and Regulations  
 b. Short Course Title: PESTICIDE LAWS/REGS
3. a. Catalog Course Description:  
 This course covers state and federal laws regulating the use of pesticides and prepares students to take California's Certified Applicator examinations. Proper and safe methods of applying agricultural chemicals are discussed, along with procedures for calculating the amount of material needed. In addition, students study alternative pest control methods.  
 b. Class Schedule Course Description:  
 This course covers state and federal laws regulating the use of pesticides and prepares students to take California's Certified Applicator examinations.  
 c. Semester Cycle (if applicable): N/A  
 d. Name of Approved Program(s):
  - ENVIRONMENTAL HORTICULTURE AS Degree for Employment Preparation
  - ENVIRONMENTAL HORTICULTURE Certificate of Achievement
  - TURFGRASS MANAGEMENT AS Degree for Employment Preparation
  - TURFGRASS MANAGEMENT Certificate of Achievement
4. Total Units: 2.00      Total Semester Hrs: 36.00  
 Lecture Units: 2      Semester Lecture Hrs: 36.00  
 Lab Units: 0      Semester Lab Hrs: 0  
 Class Size Maximum: 36      Allow Audit: No  
 Repeatability No Repeats Allowed  
 Justification 0
5. Prerequisite or Corequisite Courses or Advisories:  
*Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm I-A)*  
N/A
6. Textbooks, Required Reading or Software: (List in APA or MLA format.)
  - a. Marer, P. (1999). *The Safe and Effective Use of Pesticides* (2nd/e). Oakland, CA University of California. ISBN: 1-879906-43-0  
 College Level: Yes  
 Flesch-Kincaid reading level: 12
  - b. Nick Christians, Michael L Agnew. *The Mathematics of Turfgrass Maintenance*. Wiley , 10-28-2016.
7. Entrance Skills: *Before entering the course students must be able:*
8. Course Content and Scope:

Lecture:

- a. Types of Pest Control  
 Biological, Cultural, Mechanical, Legal, Misc. and Integrated Pest Management
- b. Chemical Control (Pesticides)
  - i. Types of Pesticides
  - ii. Chemical Basis of Pesticides
  - iii. Formulations
  - iv. LD50
  - v. Toxicity of Pesticides, Signal Words
  - vi. Environmental Problems/Hazards

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- vii. Pesticide Labels
- c. Laws Governing the Use of Pesticides
  - i. Pesticide Registration
  - ii. Restricted Chemicals
  - iii. Ag. Pest Control Advisors
  - iv. Certified Applicators
- d. Pesticide Safety - Protecting People and the Environment
  - i. Protective Gear
  - ii. General Precautions
  - iii. First Aid
  - iv. Storing & Disposing of Pesticides and Empty Containers
  - v. Record Keeping
  - vi. Worker Training Requirements
  - vii. Pesticide Emergencies
- e. Pesticide Application
  - i. Methods
  - ii. Types of Application Equipment
- f. Calculations of Amounts Needed

Lab: (if the "Lab Hours" is greater than zero this is required)

## 9. Course Student Learning Outcomes:

1.  
Identify the proper safe methods of agricultural chemical application.
2.  
Describe the proper components of a pesticide label and to identify the 'signal word'.
3.  
Discuss alternative pest control methods and their impact on the environment.

## 10. Course Objectives: *Upon completion of this course, students will be able to:*

- a. Analyze the need for chemical application in relation to alternative control measures to minimize environmental problems.
- b. Calculate the amount of material needed.
- c. Recall and explain proper mixing procedures, including assessing and mitigating potential safety problems.
- d. Practice filling out required forms.
- e. Explain how to choose the appropriate application method and equipment.
- f. Demonstrate an understanding of proper storage and disposal of pesticides and containers.
- g. Demonstrate an understanding of state and federal pesticide laws and regulations.

## 11. Methods of Instruction: *(Integration: Elements should validate parallel course outline elements)*

- a. Demonstration, Repetition/Practice
- b. Discussion
- c. Lecture
- d. Participation

Other Methods:

Reading assignments – covering Laws and Regulations, Safe and Effective Use of Pesticides, and I.P.M. techniques  
Group discussion  
Use of various media  
Use of equipment relating to application of pesticides, calibration demonstrations.

## 12. Assignments: *(List samples of specific activities/assignments students are expected to complete both in and outside of class.)*

In Class Hours: 36.00

Outside Class Hours: 72.00

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## a. In-class Assignments

- a. Classroom participation is expected and required.
- b. Detailed note taking.

## b. Out-of-class Assignments

- a. Home work from each chapter to demonstrate comprehension of each chapter
- b. Calculations for calibration of backpack sprayer and walk behind sprayer
- c. Describing techniques for setting up an I.P.M. program for Turf, Nursery and Orchard situations.

### 13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*

- Written homework
- Term or research papers
- Presentations/student demonstration observations
- Mid-term and final evaluations
- Student participation/contribution
- Student preparation
- Oral and practical examination
- Other
  - a. Ability to demonstrate safe and effective use of pesticide equipment.
  - b. Ability to demonstrate label analysis of pesticides, herbicides, and fungicides.

### 14. Methods of Evaluating: Additional Assessment Information:

### 15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*

#### PO - Career and Technical Education

- Fulfill the requirements for an entry- level position in their field.
- Apply critical thinking skills to execute daily duties in their area of employment.
- Apply critical thinking skills to research, evaluate, analyze, and synthesize information.
- Display the skills and aptitude necessary to pass certification exams in their field.
- Exhibit effective written, oral communication and interpersonal skills.
- Transfer to a higher level learning institution

#### IO - Personal and Professional Development

- Self-evaluate knowledge, skills, and abilities.

#### IO - Scientific Inquiry

- Collect and analyze data. Skills of data collection include an understanding of the notion of hypothesis testing and specific methods of inquiry such as experimentation and systematic observation.
- Predict outcomes utilizing scientific inquiry: using evidence and assertions determine which conclusions logically follow from a body of quantitative and qualitative data.
- Analyze quantitative and qualitative information to make decisions, judgments, and pose questions.

### 16. Comparable Transfer Course

University System	Campus	Course Number	Course Title	Catalog Year
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### 17. Special Materials and/or Equipment Required of Students:

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### 18. Materials Fees: Required Material?

Material or Item	Cost Per Unit	Total Cost
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19. Provide Reasons for the Substantial Modifications or New Course:

Remove English 70 advisory

20. a. Cross-Listed Course (Enter Course Code): N/A  
b. Replacement Course (Enter original Course Code): N/A

21. Grading Method (choose one): Letter Grade Only

22. MIS Course Data Elements

- a. Course Control Number [CB00]: CCC000266735  
b. T.O.P. Code [CB03]: 10300.00 - Plant Science  
c. Credit Status [CB04]: D - Credit - Degree Applicable  
d. Course Transfer Status [CB05]: B = Transfer CSU  
e. Basic Skills Status [CB08]: 2N = Not basic skills course  
f. Vocational Status [CB09]: Possibly Occupational  
g. Course Classification [CB11]: Y - Credit Course  
h. Special Class Status [CB13]: N - Not Special  
i. Course CAN Code [CB14]: N/A  
j. Course Prior to College Level [CB21]: Y = Not Applicable  
k. Course Noncredit Category [CB22]: Y - Not Applicable  
l. Funding Agency Category [CB23]: Y = Not Applicable  
m. Program Status [CB24]: 1 = Program Applicable

Name of Approved Program (if program-applicable): ENVIRONMENTAL HORTICULTURE, ENVIRONMENTAL HORTICULTURE, TURFGRASS MANAGEMENT, TURFGRASS MANAGEMENT

*Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)*

23. Enrollment - Estimate Enrollment

First Year: 36  
Third Year: 36

24. Resources - Faculty - Discipline and Other Qualifications:

- a. Sufficient Faculty Resources: Yes  
b. If No, list number of FTE needed to offer this course: N/A

25. Additional Equipment and/or Supplies Needed and Source of Funding.

N/A

26. Additional Construction or Modification of Existing Classroom Space Needed. (Explain:)

N/A

27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES

Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Eddie Vaca Origination Date 10/27/17