

CATALOG INFORMATION

Dept and Nbr: AGRI 70

Title: INT PEST MANAGEMENT

Full Title: Integrated Pest Management

Last Reviewed: 1/25/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: AG 52

Catalog Description:
Exploration of major agricultural pests, including insects, weeds, and diseases, and their impact on commercial crops and the landscape. The course focuses on integrated pest management, including cultural, biological, mechanical/physical, and chemical control methods. Course is designed to assist students in preparing for California licensing exams in pest management.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Exploration of major agricultural pests, including insects, weeds, and diseases, and their impact on commercial crops and the landscape. The course focuses on integrated pest management, including cultural, biological, mechanical/physical, and chemical control methods. Course is designed to assist students in preparing for California licensing exams in pest management. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:	Transferable	Effective: Fall 1981	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:

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

1. Identify ecological principles as they relate to the principles and concepts of integrated pest management.
2. Classify pests into the major taxonomic groups significant to crops and landscape.
3. Identify the major types of agricultural and landscape pests.
4. Detect and analyze pest infestation damage caused by insects, weeds, diseases, and other common pests.
5. Observe and identify significant anatomical features of pests using microscopes, hand lenses, or other diagnostic equipment.
6. Monitor pests in agricultural and landscape settings and produce a log of pest activity and population levels.
7. Describe the basic methods of biological, cultural, mechanical/physical, and chemical pest control.
8. Develop an integrated pest management strategy for a specific crop or landscape site.
9. Compare the classifications and formulations of pesticides and their use in a pest control environment.
10. Outline the basic laws and regulations governing the use of pesticides.
11. Describe how to prepare pesticides/spray equipment safely and accurately, and (using mock products) demonstrate the correct application of these materials.
12. List methods for responding to accidents and environmental hazards involving pest control materials.

Topics and Scope:

I. Introduction

- A. Integrated Pest Management (IPM)
- B. Laws and regulations

II. Ecological Principles related to IPM concept

III. Pest ID/Classification

- A. Arthropods
- B. Mollusks
- C. Nematodes
- D. Vertebrates
- E. Weeds.
- F. Pathogens (disease causing agents)
 - 1. bacteria
 - 2. fungi
 - 3. viruses
- G. Abiotic disorders

IV. Monitoring Procedures

V. Management Methods of IPM Programs

- A. Biological
- B. Cultural
- C. Mechanical/Physical
- D. Chemical

VII. Pesticide use

- A. Laws & regulations
- B. Pesticide label and signal words
- C. Personal protective equipment and safety procedures
- D. Calibration of equipment

VIII. Health & Environmental Concerns

- A. Pesticide emergencies
- B. Minimizing environmental risks

Assignment:

1. Three trade article reviews.
2. Video worksheets.
3. Five field trip write-ups (alternative projects are available).
4. Speaker reports.
5. Major research investigation paper of 8 to 10 pages.
6. Formal presentation on pest management research for a particular crop.
7. Internet assignments/research.
8. Reading of approximately 20 pages per week.
9. Quizzes, mid-term, and final exam.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Reading reports, Lab reports, Term papers, Reports on internet research.	Writing 10 - 30%
Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.	
Homework problems, Field work, Lab reports, Quizzes, Exams	Problem solving 15 - 30%
Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.	
Class performances	Skill Demonstrations 5 - 10%
Exams: All forms of formal testing, other than skill performance exams.	
Multiple choice, True/false, Matching items, Completion, Short answer.	Exams 20 - 50%
Other: Includes any assessment tools that do not logically fit into the above categories.	
Field trip attendance.	Other Category 5 - 10%

Representative Textbooks and Materials:

1. IPM in Practice: Principles and Methods of Integrated Pest Management. University of California Publication #3418, 2006.
 2. Pests of Landscape Trees and Shrubs: An Integrated Pest Management Guide. UC Davis Agriculture & Natural Resources, 1994.
 3. Pests of the Garden & Small Farm, 2nd ed.: A Grower's Guide to Using Less Pesticide. UC Davis Agriculture & Natural Resources, 1998.
 4. Natural Enemies Handbook: The Illustrated Guide to Biological Pest Control. UC Davis Agriculture & Natural Resources, 1998.
 5. Soil Solarization: A Nonpesticidal Method for Controlling Diseases, Nematodes, and Weeds. UC Davis Agriculture & Natural Resources, 1997.
 6. Grape Pest Management. 2nd ed. UC Davis Agriculture & Natural Resources, 1992.
 7. The Safe and Effective Use of Pesticides. UC Davis Agriculture & Natural Resources, 2000.
- (Resources are those used by state licensing examiners and are updated accordingly.)