AGRI 70 Course Outline as of Fall 2021

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	8	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 (IPM), 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 or appropriate placement based on AB705 mandates

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 (IPM), 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 or appropriate placement based on AB705 mandates
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

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Outline the knowledge expectations mandated by California Department of Pesticide Regulation in order to pass pest management licensing exams.
2. Identify regionally significant plant and insect pest organisms.
3. Design an integrated pest management plan.

Objectives:
At the conclusion of this course, the student should 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 to Pest Management and the IPM Concept
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
VI. Pesticide Use
  A. Laws and regulations
  B. Pesticide label and signal words
  C. Personal protective equipment and safety procedures
  D. Calibration of equipment
VII. Health and Environmental Concerns
  A. Pesticide emergencies
  B. Minimizing environmental risks

Concepts presented in lecture are applied and practiced in lab.

Assignment:

Lecture Assignments:
1. Weekly reading (20-30 pages)
2. Three trade article reviews (1-2 pages)
3. One written report (3- 5 pages) on integrated pest management (IPM) plan for a particular crop or pest/disease
4. One formal presentation on integrated pest management (IPM) plan for a particular crop or pest/disease (15 minutes)
5. Quizzes, mid-terms, and final exam

Lab Related Assignments:
1. Weekly lab reports
2. Insect ID collection
3. Weed ID collection

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.

Reports, trade article reviews	Writing 10 - 30%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Integrated pest management (IPM) plan for a particular crop or pest/disease	Problem solving 10 - 30%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Insect ID collection, weed ID collection	Skill Demonstrations 10 - 30%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes, mid-terms, final exam	Exams 30 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

IPM plan presentation	Other Category 10 - 30%

Representative Textbooks and Materials:
IPM in Practice: Principles and Methods of Integrated Pest Management. 2nd ed. University of California Publication #3418. 2012 (classic)
Natural Enemies Handbook: The Illustrated Guide to Biological Pest Control. University of California Publication #3386. 1998 (classic)
The Safe and Effective Use of Pesticides. 3rd ed. University of California Publication #3324. 2016 (classic)
Instructor prepared materials.