

CREDIT COURSE OUTLINE

I. COVER PAGE

(1) I	PLS 6	(2) Pl	EST	TICIDES			(3) 3	
Nun	nber				Title		Units	
(4) Lecture / Lab Hours:			(8)Clas	sification:				
F	Course Hours							
		Weekly Lec hours:		3.00			Degree applicable:	X
		Weekly Lab hours:		0		1	Non-degree applicable [.]	
\vdash		Total Contact hours:		54.00			Basic skills	
⊢		Total Contact notab.					Buble billing.	J
	Lec will generate	hour(s) outside work.			(9)RC	Fulfills AS/A	A degree requirement:	
	Lab will generate	hour(s) outside work.			(*)===	(area)		
						General educa	ation category:	
(5)	Grading Basis:	Grading Scale Only				Major:	Agriculture & Technology	
(-)	0.000.00	Pass/No Pass option		X			Plant & Soil Science, Optio	on A
		Pass/No Pass only					Plant & Soil Science: Plant	Protection
6	Advisories:	r usb/r to r usb only				Certificate of:	Plant & Soil Science: Pest (Control Advisor
							Plant & Soil Science: Plant	Protection
	• <u>Eligibility</u>	<u>tor ENGL 125</u>	tine	(1)	 	Cortificato in:		
	Requisite (Dutcomes:	uve	(1)	 	Certificate III.		
	• un	ified supporting details	for	each body	(10)05	I I	Descelourante	v
	pa	ragraph which begin wi	ith a	topic sentence	(10)CS	U	Daccalauleate.	<u>Λ</u>
	• an	evaluation and analysis	s of	ideas at the	three	e times)	uise may be repeated	0
	ap	propriate course level	in	ludas correct				
	• CO	nitalization spelling us	e o	f homophones	(12)C-I	D.		
	ete	C.		r nonnophones,	Propose	ed Start Date:		Fall 2012
	• an	avoidance of major gra	ımn	natical errors	ropos	a start Dute.		1 un 2012
	in in	cluding verb tense issue	s, s	ubject-verb				
	ag	reement, pronoun agree	me	nt problems,				
		lices	s ai	ia comma				
	• ap	propriate use of academ	nic l	anguage and				
	de	escriptive vocabulary		0 0				
	Current Ob	ojectives:						
	• Be	e aware of pesticide tox	ICITI	es and				
	• Be	e undated on the most ci	urre	nt technology				
	re	lated to pesticides.	unc	int teennology				
	• Ki	now where and how to f	find	specific				
	in in	formation on insecticide	e, he	erbicides and				
	fu	ngicides.						
	• Eligibility	for MATH 201						
	Advisory (13) - Outcome to Objec	tive	e (1)				
	Requisite	Jutcomes:	on	rations to				
	• Aj	tegers	ope					
	• A	pply the four arithmetic	ope	erations to				
	fra	actions.	•					
	• A]	pply the four arithmetic	ope	erations to				
	de Current Ol	cimals.						
		jectives: e undated on the most of	ILLE	nt technology				
	re	lated to pesticides.	ant	in teennology				
(7)	Pre-requisites (requi	uires C grade or better):						
ľ	Corequisites:	<u> </u>						
	A		_					

(12) Catalog Description:

Pesticide science is a specialized field requiring knowledge and experience with the laws and regulations, chemistry, biology and technology for safe and economical control of plant competitors. This course introduces and reviews current pesticide science and the safe and economical application in California Agriculture.

II. COURSE OUTCOMES:

(Specify the learning skills the student demonstrates through completing the course and link critical thinking skills to specific course content and objectives.)

Upon completion of this course, students will be able to:

- I. Effectively and efficiently select a pesticide based on mode of action, label requirements and fit with cultural operations.
- II. Recommend a chemical control that avoids pesticide resistance.
- III. Develop safe and economical insecticide, herbicide and fungicide plans.
 - III. COURSE OBJECTIVES:

(Specify major objectives in terms of the observable knowledge and/or skills to be attained.)

In the process of completing this course, students will:

- I. Be aware of pesticide toxicities and persistance in the environment.
- II. Be updated on the most current technology related to pesticides.
- III. Know where and how to find specific information on insecticide, herbicides and fungicides.

IV. COURSE OUTLINE:

Lecture Content:

- I. Introduction to Pesticides
- II. Pesticides and Environmental Considerations
 - 1. Endangered Species
 - 2. Resistance
- III. Insects
 - 1. Methods of Control
 - 2. Insecticide Classification
- IV. Plant Disease Agents
 - 1. Fungicides
- V. Vertebrate Pests
- VI. Weeds
 - 1. Identification and Control Methods
 - 2. Herbicide Classification
 - 3. Herbicide Modes of Action
 - 4. Harvest Aids and Growth Regulators
- VII. Integrated Pest Management
- VIII. Pesticide Laws, Liability and Recordkeeping
 - IX. The Pesticide Label
 - X. Pesticide Safety
- XI. Pesticide Formulations and Adjuvants
- XII. Pesticide Application Equipment
- XIII. Calibration
- XIV. Pesticide Calculations and Formulas
- XV. Pesticide Transportation, Storage, Decontamination and Disposal

V. APPROPRIATE READINGS

Reading assignments may include but are not limited to the following:

- I. Sample Text Title:
 - 1. Recommended Krieger, R. Hayes' Handbook of Pesticide Toxicology, ed. 3rd Academic Press, Burlington, MA, 2010,
- II. Other Readings

X Global or international materials or concepts are appropriately included in this course

Multicultural materials and concepts are appropriately included in this course

If either line is checked, write a paragraph indicating specifically how global/international and/or multicultural materials and concepts relate to content outline and/or readings.

Case studies of pesticide resistance, abuse and success as observed on the global level will be utilized in lecture and online presentations.

VI. METHODS TO MEASURE STUDENT ACHIEVEMENT AND DETERMINE GRADES:

Students in this course will be graded in at least one of the following four categories. Please check those appropriate. A degree applicable course must have a minimum of one response in category A, B, or C.

A. W	A. Writing			
	Check either 1 or 2 below			
	1. Substantial writing assignments are required. Check the appropriate boxes below and provide a written description in the space provided.			
X	X 2. Substantial writing assignments are NOT required. If this box is checked leave this section blank. For degree applicable courses you must complete category B and/or C.			
	a) essay exam(s) d) written homework			
	b) term or other paper(s) e) reading reports			
	c) laboratory report(s) f) other (specify)			

Required assignments may include but are not limited to the following:

B. Problem Solving Computational or non-computational problem-solving demonstrations, including:				
Х	X a) exam(s) d) laboratory reports			
X b) quizzes		e) field work		
X c) homework problems f) other (specify):				
n				

Required assignments may include but are not limited to the following:

C. Skill demonstrations, including:			
Χ	a) class performance(s)	X	c) performance exams(s)
	b) field work		d) other (specify)

Required assignments may include but are not limited to the following:

D. O	D. Objective examinations including:				
Χ	a) multiple choice	Х	d) completion		
Χ	b) true/false		e) other (specify):		
Χ	c) matching items				

COURSE GRADE DETERMINATION:

Description/explanation: Based on the categories checked in A-D, it is the recommendation of the department that the instructor's grading methods fall within the following departmental guidelines; however, the final method of grading is still at the discretion of the individual instructor. The instructor's syllabus must reflect the criteria by which the student's grade has been determined. (A minimum of five (5) grades must be recorded on the final roster.)

If several methods to measure student achievement are used, indicate here the approximate weight or percentage each has in determining student final grades.

Final Exam = 25-35% Mid-term Exam = 20-25% Online Assignments = 40-50%

VII. EDUCATIONAL MATERIALS

For degree applicable courses, the adopted texts, as listed in the college bookstore, or instructor-prepared materials have been certified to contain college-level materials.

Validation Language Level (check where applicable):	College-Level Criteria Met
Textbook Reference materials Instructor-prepared materials Audio-visual materials	$\begin{array}{c c} YES & NO \\ \hline X \\ \hline \end{array}$
Indicate Method of evaluation: X Used readability formulae (grade level 10 or higher) X Text is used in a college-level course X Used grading provided by publisher X Other: (please explain; relate to Skills Levels)	
Computation Level (Eligible for MATH 101 level or higher where applicable)	<u> X </u>
Content Breadth of ideas covered clearly meets college-level learning objectives of this course Presentation of content and/or exercises/projects:	X

 Requires a variety of problem-solving strategies including inductive and deductive reasoning.
 X

 Requires independent thought and study
 X

 Applies transferring knowledge and skills appropriately and efficiently to new situations or problems.
 X

 List of Reading/Educational Materials
 X

Х		
Х		
Х		

Recommended - Krieger, R. Hayes' Handbook of Pesticide Toxicology, ed. 3rd Academic Press, Burlington, MA, 2010,

Comments:

This course requires special or additional library materials (list attached). This course requires special facilities:

Eligibility for English 126 is advisory for the target course. <u>X</u> Eligibility for English 125 is advisory for the target course.

Attached Files:

• •				
BASIC SKILLS ADVISORIES PAGE The skills listed are skills are listed as the outcomes from English 252, 262, and needed at the beginning of the target course and check off th Eligibility for ENGL 125 (as outcomes for ENGL 252) Write an essay of at least 750 words with an	those needed for eligibility for English 125, 126, and Math 201. These Math 250. In the right hand column, list at least <u>three</u> major basic skills the corresponding basic skills listed at the left. Be aware of pesticide toxicities and persistance in the			
 introduction, at least two body paragraphs, and a conclusion. This paper will include: a thesis statement unified supporting details for each body paragraph which begin with a topic sentence an evaluation and analysis of ideas at the appropriate course level complete sentences which includes correct 	 environment. Be updated on the most current technology related to pesticides. Know where and how to find specific information on insecticide, herbicides and fungicides. 			
 complete sentences which includes confect capitalization, spelling, use of homophones, etc. an avoidance of major grammatical errors including verb tense issues, subject-verb agreement, pronoun agreement problems, fragments, fused sentences and comma splices appropriate use of academic language and descriptive vocabulary 				
 correct usage of MLA format writing that is free from plagiarism Plan and revise with guidance, employing all stages of the writing process when necessary. Write an in-class paper with a beginning, middle, and end that communicates a clear idea. 				
(as outcomes for MATH 250)				
Apply the four arithmetic operations to integers. Apply the four arithmetic operations to fractions. Apply the four arithmetic operations to decimals. Evaluate integers raised to whole number exponents using the definition of exponents.	Be aware of pesticide toxicities and persistance in the environment. X Be updated on the most current technology related to pesticides. Know where and how to find specific information on insecticide, herbicides and fungicides.			
Check the appropriate spaces. X Eligibility for Math 201 is advisory for the target c	Check the appropriate spaces. X Eligibility for Math 201 is advisory for the target course.			

If the reviewers determine that an advisory or advisories in Basic Skills are all that are necessary for success in the target course, stop here, provide the required signatures, and forward this form to the department chair, the appropriate associate dean, and the curriculum committee.

REQUISITES

No requisites

JUSTIFICATION OF LIMITATION ON ENROLLMENT

Enrollment in courses or blocks of courses may be limited based on performance, honors, or other performance based criteria. Be mindful of the disproportionate impact the limitation will have on specific groups of students. It is important to determine if the limitation will disproportionately keep under-represented students from enrolling in the course or block of courses.

Describe the reasons for limiting the enrollment.

Course Designator: PLS 6
Course Title(s): PESTICIDES
Rationale for Limiting Enrollment:
0