

## PLANT PROTECTION MATERIALS

PSSC 353 – Fall 2011 Syllabus

<b>Professor:</b>	Dr. Betsy Boyd email through Vista course portal	<b>Office:</b>	225 Plumas Hall (530) 898-6879
<b>Lecture:</b>	MW 8:00 – 8:50 303 Plumas Hall	<b>Office Hours:</b>	MW 9:00 – 10:00 MW 11:00 – 12:30
<b>Lab:</b>	W 2:00 – 4:50 303 Plumas Hall (except laboratories held at the University Farm & other field trips)		
<b>Prerequisites:</b>	CHEM 107 or CHEM 111 and PSSC 250		
<b>Final Exam:</b>	Friday, 16 December 2011, 8:00 – 9:50, PLMS 303		

### Course Objectives:

The student will gain an understanding of the history, laws and regulations, safe and responsible use, toxicology, risks, benefits, and sustainability in the use of agricultural chemicals including pesticides, fertilizers, and antimicrobials. Throughout the course, applied examples will be used to generate discussion and aid student ability to formulate integrated agrichemical management programs.

### Required Texts:

O'Connor-Marer, P. J. 2000. *The Safe and Effective Use of Pesticides*. 2<sup>nd</sup> Ed. University of California, Statewide Integrated Pest Management Program, Agriculture and Natural Resources. Pub. #3324. Oakland, CA. 342 pp. ISBN: 1-879906-43-0

Vista handouts (including but not limited to: lab handouts, PPT slides, journal articles, other class assignments)

### Supplemental Resources:

O'Connor-Marer, P. J. and S. Cohen. 2000. *Pesticide Safety: A reference manual for private applicators*. 2<sup>nd</sup> Ed. University of California, Statewide Integrated Pest Management Program, Agriculture and Natural Resources. Pub. #3383. Oakland, CA. 120 pp.

UCIPM online: [www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu)

Crop Data Management Systems (CDMS) online: [www.cdms.net](http://www.cdms.net)

Insecticide Resistance Action Committee (IRAC) online: [www.iraac-online.org](http://www.iraac-online.org)

Herbicide Resistance Action Committee (HRAC) online: [www.hracglobal.com](http://www.hracglobal.com)

Fungicide Resistance Action Committee (FRAC) online: [www.frac.info/frac/index.htm](http://www.frac.info/frac/index.htm)

California Department of Pesticide Regulation (CDPR) online: [www.cdpr.ca.gov](http://www.cdpr.ca.gov)

**Tentative Lecture Schedule:** (Subject to change depending on class interest and mastery of principles.)

Week	Important Dates	Lecture Topic	Readings
1	22 Aug.	Introduction, Course Outline & Requirements, Questionnaire	Chpt. 1
		Defining Agricultural Chemicals and Their Use	Chpt. 2
2		Historical chemical use worldwide and in California	See Vista
		Plant Nutrients & Soils	See Vista
3	5 Sept.	LABOR DAY (no class)	
		Fertilizers	See Vista
4		Types of Pesticides	Chpt. 3
		Pesticides & Adjuvants	Chpt. 3
5		Labels & Terminology	Chpt. 4
		Labels continued, Registration, Permits	Chpt. 4
6	28 Sept.	Registration, Permits; Review for Exam	Chpt. 4
		EXAM #1	
7		Application Methods, Calibration	Ch. 9, 10
		Rates, Timing, Formulations	Chpt. 3, 8
8		Fungicides	Chpt. 1
		Fungicides	Chpt. 1
9		Insecticides	Chpt. 1
		Insecticides	Chpt. 1
10		Herbicides	Chpt. 1
		Herbicides	Chpt. 1
11		Making Chemical Recommendations	Chpt. 6
		Chemical Fate in the Environment	Chpt. 6
12	9 Nov.	Review for Exam	
		EXAM #2	
13	14 Nov.	TBA—see Vista for assignment	
	16 Nov.	TBA—see Vista for assignment	
	22 Nov.	THANKSGIVING BREAK	
		THANKSGIVING BREAK	
14		Resistance Management	Chpt. 5
		Resistance Management	Chpt. 5
15		Conventional, Organic, Sustainable Practices & Integrated Pest Mgt	Chpt. 2, 3
		Agrichemicals in the context of IPM	See Vista
16	16 Dec.	FINAL EXAM, Friday, 8:00 – 9:50 am	

**Tentative Laboratory Schedule:**

(Subject to change due to crop availability, time, and weather constraints.)

Week	Date	Laboratory Topic	Handouts
1	24 Aug.	Overview of laboratory project	In class
2	31 Aug.	Soils, Plants, and Fertilizers	Check Vista
3	7 Sept.	Sampling and Scouting at the Farm	Check Vista
4	14 Sept.	Guest Speaker-Bill Graves	Check Vista
5	21 Sept.	Sampling and Scouting at the Farm	Check Vista
6	28 Sept.	Types of Pests, Proper Collection and Identification (Chpt. 1)	Check Vista
7	5 Oct.	Types of Pests, Proper Collection and Identification (Chpt. 1)	Check Vista
8	12 Oct.	Proper Use & Handling, Safety, Personal Protective Equipment (Chpt. 6)	Check Vista
9	19 Oct.	Chemical Application Equipment, Calibration (Chpt.10)	Check Vista
10	26 Oct.	Pesticides and Pollinators	Check Vista
11	2 Nov.	Butte County Agricultural Commissioner's Office	Check Vista
12	9 Nov.	Oral Presentations	Check Vista
13	16 Nov.	TBA	Check Vista
	23 Nov.	THANKSGIVING BREAK	Check Vista
14	30 Nov.	Oral Presentations	
15	7 Dec.	Oral Presentations	
16	16 Dec.	FINAL EXAM, Friday, 8:00 – 9:50 am	

**Laboratory Information:**

1. Students are responsible for printing laboratory handouts from Vista (WebCT) prior to the lab session.
2. A number of laboratory sections will involve mandatory field trips, which will be held at alternate class sites. Unless otherwise announced, it will be each student's responsibility to arrange transportation to the alternate class site.
3. Field locations will be kept as local as possible and exact dates and locations will be announced.
4. Every effort will be made to adhere to the laboratory hours published in the schedule of classes, however, some field trips may run long depending on location and activity.

**Assignments and Point Values:**

1. There will be three exams (two mid-term exams, one cumulative final exam). Mid-terms will be worth 100 points each and the final worth 150 points. Exams will include (but not be limited to) multiple choice, true-false, matching, and short-answer questions. Missed exams count as zero. Make-up exams are by arrangement and will be granted only for documented emergencies.
2. There will be unannounced mini-tests, quizzes, and activities throughout the semester. These mini-tests, quizzes, and activities may be based on class lecture materials, assigned readings, etc. Missed mini-tests, quizzes, and activities count as zero; no make-ups. The mini-tests, quizzes, and activities will be worth variable point values for a cumulative total of 100 points possible.
3. During each laboratory, participation and comprehension will be evaluated via problem sets, activities, projects, quizzes, or other methods for a total of 100 points possible. Missed laboratories count as zero.
4. There will be 1 oral presentation during the semester worth 100 points. Additional information forthcoming.

*\*\*Students are required to keep all evaluated work until final grades have been submitted, or they will have no evidence in case there is a problem with their final grade (i.e. missing scores).*

### **Course Grading:**

Due to privacy concerns, grades will only be discussed in person between the instructor and the student, (not through email or by phone). Grades are earned on accuracy and quality of the final product, not effort. Some students need to put more effort to learning the material, some less. Experience and previous knowledge all affect students' grades. *Trying hard is not equivalent to learning or mastering the material.*

2 Mid-term Exams @ 100 points each =	200
1 Cumulative Final Exam @ 150 points =	150
5 Quizzes @ 25 points each (drop 1) =	100
Laboratory Activities =	100
Oral Presentation @ 100 points =	<u>100</u>
Grand Total =	650 points possible

### **Grading Scale:**

Grades will be calculated to tenths of a percent, not whole numbers. For example, 92.8% is an A- and 93.0% is an A.

### **Attendance:**

Attendance in lectures, laboratories, and field trips is critical to your success in this course. Lack of attendance will affect your grade through missed quizzes, assignments, and/or laboratory/field trip activities, as well as failure to receive essential information provided during class hours.

### **Academic Integrity:**

This course will abide by the university policy (EM 04-36) for academic honesty and integrity. Plagiarism (see the following page in syllabus) and cheating are grave violations of the academic integrity policy of the California State University, Chico. If there is evidence that you have been involved in any form of academic dishonesty, you will receive an "F" grade for the course and a report will be provided to Student Judicial Affairs for further action.

This policy is posted at <http://www.csuchico.edu/prs/EMs/2004/04-036.shtml>

More resources: <http://www.csuchico.edu/vpaa/integrity/Administration/index.html>

### **Expected Student Conduct and Classroom Disruption:**

If your behavior is distracting to the professor or students, you will be verbally asked to 1) cease that behavior, 2) adhere to class vote, and/or 3) leave the classroom. Any noises from electronic devices will be considered a class distraction. Students are expected to turn off all electronic devices during class time, to pay attention and participate in class meetings, and to remain in class during the entire session with the exception of breaks. All class participants are expected to exhibit respectful behavior to other students and the professor. All students have the right and privilege to learn in class, free from harassment and disruption. Inappropriate or disruptive behavior will not be tolerated. **\*\*Consequences for class disruptions will be decided by class vote at the time of the infraction.\*\*** Failure to adhere to class vote *or greater than two infractions* will result in dismissal from class, 0 points for that class session with no make-up, and the student must meet with the professor about correcting the behavior prior to entry into the next class session.

Examples of classroom disruption include, but are not limited to: 1) Repetitive non-authorized leaving & entering the classroom, 2) Making loud or distracting noises, 3) Persisting to speak without being recognized, 4) Repeated answering of cellular phone or allowing pagers to beep, 5) Repeated use of text messaging, 6) Resorting to physical threats or personal insults. This course follows standards set in the Code of Students Rights and Responsibilities (EM 96-38) and students are subject to disciplinary action for violation of that code. For more info: [http://www.csuchico.edu/sjd/\\_assets/docs/Classroom%20Disruption.pdf](http://www.csuchico.edu/sjd/_assets/docs/Classroom%20Disruption.pdf)

### **Plagiarism:**

Plagiarism is use of work of others (either direct copies or close paraphrases) as one's own original work. If quotations and/or passages from other works are used in papers, they must be accorded proper citation in order to avoid any misunderstandings about plagiarism. Hence, all work shall be individually produced. Student Judicial Affairs will be notified of any incident involving evidence of academic dishonesty including plagiarism, copied work of others, allowing others to copy your work, cheating on an exam, altering class material or scores, and inappropriate possession of exams or sensitive material. Consequences of academic dishonesty are described above.

All students are responsible for ethical scholarship and for knowing what plagiarism is and how to avoid it. Please review the following guidelines and tutorials at the following website.

<http://www.csuchico.edu/sjd/integrity.shtml>

### **Disabilities:**

If you have a disability requiring special accommodation, you must contact an Accessibility Resource Center (ARC) counselor at Student Services Center 170, (530) 898-5959. In addition, notify me within the first two weeks of the semester so I can work with you to receive services. It is the student's responsibility to submit all ARC requests to the ARC office in a timely manner. No exception will be made for late submissions/requests. For more information see the ARC website:

<http://www.csuchico.edu/arc/index.shtml>

### **Instruction Disclaimer:**

The professor(s) are in no way responsible for application or use of chemicals mentioned or described in this course. They make no warranties, expressed or implied, as to accuracy or adequacy of any agricultural chemical information presented in the course, nor do they guarantee the current status of registered uses of any of the chemicals. Mention of commercial products or brand names is for convenience of the student only, and implies neither endorsement of the product or manufacturer nor criticism of products or manufacturers not mentioned by the professor(s).