



INTRODUCTION TO WEED SCIENCE

PSSC 343 – Spring 2012 Syllabus

| | | | |
|----------------------|---|----------------------|--|
| Professor: | Dr. Betsy Boyd EMAIL: use Blackboard Vista | Office: | 225 Plumas Hall (530) 898-6879 |
| Lecture: | MW 10:00 – 10:50 329 Plumas Hall | Office Hours: | MW 9 am – 10 am Th 9:15 am – 12:15 pm |
| Lab: | M 2:00 – 4:50 329 Plumas Hall & CSUC Farm Classroom ____ | | |
| Prerequisite: | AGRI 331 Agricultural Ecology | | |
| Final Exam: | Wednesday, 16 May 2009, 10:00 – 11:50, PLMS 329 | | |

Course Objectives:

Students should expect to learn how to identify plants, explain modes of spread, and describe population ecology of weeds and other invasive plant species. Emphasis will be placed on sustainable management utilizing an integration of biological, cultural, mechanical, and chemical manipulations of weeds and invasive species. Additionally, methods of crop and vegetation management to manage and reduce weed populations will be discussed. Throughout the course, applied examples will be used to generate discussion and aid in the students' ability to formulate integrated weed management programs.

Required Texts:

Ross, M.A., and C.A. Lembi. 2009. *Applied Weed Science: Including the Ecology and Management of Invasive Plants*. 3rd Ed. Prentice Hall, Upper Saddle River, NJ. 576 pp

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

Recommended Texts:

DiTomaso, J.M. and E.A. Healy. 2007. *Weeds of California and Other Western States*. Vols. 1 & 2. University of California, Statewide Integrated Pest Management Program, Agriculture and Natural Resources. Pub. #3488. Oakland, CA. 1808 pp.

Whitson, T.D. ed. 2004. *Weeds of the West*. 9th ed. University of California, Statewide Integrated Pest Management Program, Agriculture and Natural Resources. Pub. #3350. Western Society of Weed Science, Grand Teton Lithography, Jackson, WY. 628 pp.

Supplemental Resources:

Flint, M.L. and P. Gouveia. 2001. *IPM in Practice Principles and Methods of Integrated Pest Management*. University of California, Statewide Integrated Pest Management Program, Agriculture and Natural Resources. Pub. #3418. Oakland, CA. 296 pp.

University of California Growers Weed Identification Handbook. University of California, Agriculture and Natural Resources Publications.

California Weed Science Society online: www.cwss.org

Western Society of Weed Science online: www.wsweedscience.org

UCIPM online: www.ipm.ucdavis.edu

Also see Blackboard weblinks

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

| Week | Important Dates | Lecture Topic | Readings |
|------|-----------------|---|------------|
| 1 | | Course Intro., Questionnaire | Chpt. 1 |
| | | Weeds in Agriculture, Econ. Impact | Chpt. 1 |
| 2 | | Why Weeds are Successful | Chpt. 2 |
| | | Why Weeds are Successful | Chpt. 2 |
| 3 | | Weed Ecology | Chpt. 3 |
| | | Weed Ecology | Chpt. 3 |
| 4 | | Mechanisms of Invasion | Chpt. 4 |
| | | Mechanisms of Invasion | Chpt. 4 |
| 5 | | Vegetation & Soil Systems | Chpt. 5,6 |
| | 22 Feb. | TBA - Vegetation & Soil Systems cont. | Chpt. 5,6 |
| 6 | | Management Methods | Chpt. 7,24 |
| | | Management Methods/Review | Chpt. 7,24 |
| 7 | 5 Mar. | EXAM #1 | |
| | | Return Exams, Class Activity | |
| | | Management Methods - Biological | |
| | | Management Methods - Biological | |
| 8 | 19 Mar. | SPRING BREAK | Chpt. 7 |
| | | SPRING BREAK | See Vista |
| 9 | | Management Methods - Chemical | Chpt. 8 |
| | | Herbicide Classification and Mode of Action | Chpt. 9 |
| 10 | 2 Apr. | TBA | See Vista |
| | 4 Apr. | TBA | See Vista |
| 11 | | Herbicide Mode of Action | Chpt. 9 |
| | | Herbicides in the Environment | Chpt. 10 |
| 12 | | Herbicide Resistance | Chpt. 11 |
| | | Herbicide Resistance | Chpt. 11 |
| 13 | | Adjuvants | Chpt. 22 |
| | | Adjuvants/Review | See Vista |
| 14 | 30 Apr. | EXAM #2 | |
| | | Safety/Regulatory Considerations in Weed Management | See Vista |
| 15 | | Applied Weed Management | Ch. 16-21 |
| | | Applied Weed Management | Ch. 16-21 |
| 16 | 16 May | FINAL EXAM, Wednesday, 10:00 – 11:50 am | |

Tentative Laboratory Schedule: (Schedule & locations may change due to time & weather constraints.)

| Week | Date | Laboratory Topic | Handouts | Location |
|------|---------|--|-------------|--------------|
| 1 | 23 Jan. | Overview of laboratory project, Weed ID, Tax. & Morph. | In class | Campus |
| 2 | 30 Jan. | Taxonomy & Morphology | Check Vista | CSUC Farm |
| 3 | 6 Feb. | Weed Biology – Seed Expt. | Check Vista | CSUC Farm |
| 4 | 13 Feb. | Seed Expt. Check | Check Vista | CSUC Farm |
| 5 | 20 Feb. | Seed Expt. Check, Tax. & Morph. | Check Vista | Campus |
| 6 | 27 Feb. | Seed Bank Expt. | Check Vista | CSUC Farm |
| 7 | 5 Mar. | Biological Mgt., & Seed Bank Expt. | Check Vista | CSUC Farm |
| | 12 Mar. | SPRING BREAK | | |
| 8 | 19 Mar. | Herbicide Symptomology, Check Expt. | Check Vista | TBA |
| 9 | 26 Mar. | Bidwell Park | Check Vista | Bidwell Park |
| 10 | 2 Apr. | TBA (Airplane Calibration?) | Check Vista | Campus |
| 11 | 9 Apr. | Herbicide Labels | Check Vista | TBA |
| 12 | 16 Apr. | TBA – (WYW) | Check Vista | Campus |
| 13 | 23 Apr. | Collection Checks – Work on Collections | Check Vista | Campus |
| 14 | 30 Apr. | Work on Collections | Check Vista | Campus |
| 15 | 7 May | Weed Collections Due – Turn in Supplies | Check Vista | Campus |
| 16 | 16 May | FINAL EXAM, Wednesday, 10:00 – 11:50 am | | PLMS 329 |

Laboratory Information:

1. Students are responsible for printing laboratory handouts from Blackboard prior to lab sessions.
2. A number of laboratories 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 one-hour exams (two mid-term exams, one cumulative final exam). Each mid-term will be worth 100 points with 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.
3. During each laboratory, participation and comprehension will be evaluated via problem sets, activities, projects, weed ID quizzes, or other methods for a total of 100 points possible. Missed laboratories count as zero.
4. There will be 1 project (Weed Collection) during the semester worth 200 points. Please see additional handouts provided for a complete description of the weed collection.

***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 rules, 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 Exams @ 100 points each = | 200 |
| 1 Final Exam @ 150 points = | 150 |
| Mini-tests, Quizzes, & Activities = | 100 |
| Laboratory Activities = | 100 |
| Weed Collection = | <u>200</u> |
| Grand Total = | 750 points possible** |

***Total points are variable depending on total number quizzes, mini-tests, and other activities offered during the semester.*

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

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 the application of use of the chemicals mentioned or described in this course. They make no warranties, expressed or implied, as to the accuracy or adequacy of any of the 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 the 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).