

California Orchard Production and Management
PSSC 266
 Fall 2011

Instructors:	Dr. Rich Rosecrance	Office:	223 Plumas
Class Schedule:	W 5:00 - 6:50	Office Hours:	Rosecrance: T 9:15-11:45 AM R 9:15 10:45 and by appointment
Lab Schedule:	W 2:00- 4:50	Email:	rrosecrance@csuchico.edu

Required Text: None required. Readings will be provided in Vista.

Course Content: The course will review the principles and practices of temperate fruit production via discussion of the basic fundamentals of plant growth and its production, crop identification, adaptability, cultivars, propagation, nutrient requirements, pollination, fruit development, cultural systems, quality determinations, and marketing. Laboratories will combine exploration of computer software useful in orchard management, hands on practice of some basic orchard skills, and the organoleptic evaluation (i.e. taste testing) of the fruit crops examined.

COURSE GOAL AND OBJECTIVES OF THE COURSE:

The goal of the course is to understand the science, culture, and management of deciduous tree fruit production practices and technologies, achieved through the following learning outcomes:

1. Historical, cultural, botanical, and scientific knowledge of temperate-zone pomology,
2. Interaction of climate and environment with the growth and development of fruit trees,
3. Uses of technology in tree-fruit production,
4. Complexity of management decisions due to the perennial nature of fruit trees, their required resource inputs, and market forces.

The goal of this course is to introduce the students to the science of pomology with the overall objective of introducing to the student to the theories, principles and practices utilized in fruit/nut production. It is the objective of this course to generate the capacity in the student for intelligent decision-making and problem solving based upon scientific knowledge and resources.

Assignments and Class Grading Procedure:

Tests and quizzes include objective and problem questions aimed at testing comprehension, ability to integrate ideas, and ability to use information as well as remember it. Most of the lab grade is based on completing lab assignments. You will be asked to do one *PowerPoint* presentations on different fruit and nut crops.

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.

YouTube videos: In groups of three, you are required to make two YouTube videos on fruit/nut production topics visited in lab (almond, walnut harvest, prune harvesting and drying, etc.). More information concerning the video project will be discussed on the second week of lab.

Labs: Labs will consist mostly of field trips this semester through some will occur at the University Farm on Hegan Lane south of town.

Attendance: You earn points toward your final grade by attending lecture and lab and taking part in the week's activities. Most of the time, you will be expected to turn in work during the next lab period. Work turned in late will be penalized 10% per day that it is late. If you miss you assigned lab, you may not be able to catch up on the work you missed.

Vista Quizzes: Your weekly online quiz will test your preparation in the reading materials, in-class discussions, and labs. You can take the quiz twice. Your higher grade will be recorded. There will be 11 quizzes (one of these is for extra credit). Quizzes will be available on Friday at 5 pm and close Wednesday at 8 am. For these quizzes you may have your textbook and notes open if you wish, but do your own work.

Exams: There will be two midterm exams and a cumulative final exam. Missed exams count as zero, unless prior arrangements have been made with me (Rich Rosecrance).

Academic Honesty: All work that you submit should be your own. If you work with others on an assignment, place the names of all of the participants on the assignment. I encourage you to work with others when you study, especially when you study for the exams. When you use written, video, or other sources of information, please cite these sources in your work. Please consult the instructor if you are not certain whether a source should be cited or how to cite a source. To reduce plagiarism, students are required to submit their papers in Turnitin (thru Vista) on the Wednesday that the paper is due

Diversity Statement: The College of Agriculture (COA) is committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach her or his own potential. In pursuit of its goal of academic excellence, COA seeks to develop and nurture diversity, believing that it strengthens the organization, stimulates creativity, promotes the exchange of ideas, and enriches campus life. The University prohibits discrimination against any member of the College's community on the basis of race, religion, color, sex, age, national origin or ancestry, marital status, parental status, gender identity, sexual orientation, ability status, health status, political affiliation or veteran status.

Weight of Assignments

<u>Evaluation</u>	<u>Contribution</u>	<u>Due Date</u>
Lab Assignments	12%	In lab
Presentation	2%	TBA
Lecture/Lab Clicker Quizzes & Assignments	12%	In class
Quizzes	22%	Wed., 2 pm
Midterms (2)	26%	See below
YouTube Videos (2)	14%	Week after video taken
Final	12%	See below

<u>Grade</u>	<u>Criterion</u>	<u>Point range</u>
A	Unusual ability and distinctive achievement	90% and above
B	Articulate, above-average performance	80-89%
C	Satisfactory performance	70-79%
D	Passing work below the standard required for graduation	63-69%
F	Failure to achieve credit	Below 63%

Tentative Schedule

Week	Date	Topic	Laboratory
1	Aug 24	1. Introduction to Fruit and Nut Production 2. Major Production Zones and Climatic Restrictions	
2	Aug 31	3. Climatic Restrictions: Temp Effects 4. Crop and Cultivars: Prunes and Peaches	Install irrigation system in olive oil orchard
3	Sept 7	5. Moisture and Soil Restrictions 6. Crop and Cultivars: Pistachios and Pecan	Prune Dryer Hamilton City; prune harvest
4	Sept 14	7. Rootstocks: General Traits 8. Crop and Cultivars: Almonds	Pistachio harvest or Nichols
5.	Sept 21	9. Orchard Establishment 10. Crop and Cultivars: Walnuts	Almond harvest/processing CAPEX Esteve
5	Sept 28	EXAM 1	No Lab
6	Oct 5	11. Light Management 12. Crop and Cultivars: Pecan	Walnut harvest/processing
7	Oct 12	13. Irrigation and Weed Control 14. Irrigation and Weed Control cont	Pecans harvest/processing
8	Oct 19	15. Nutrition 16. Nutrition cont.	Nichols
9	Oct 26	17. Flowering Habits of Fruit Crops 18. Crop and Cultivars: Olives	Lassen land and
10	Nov 2	19. Pollination Requirements 20. Fruit Growth and Development	Ca Olive Ranch/ Antonio Lucern
11	Nov 9	21. Thinning - Mechanical and Chemical 22. Basics of Training and Pruning	Nursery
12	Nov 16	23. Review 24. EXAM 2	TBD
13	Nov 23	THANKSGIVING	
14	Nov 30	25. Basics of Training and Pruning cont. 26. Growth Regulators in Fruit Production	Student Presentations
15	Dec 7	27. Fruit Maturity, Post-Harvest Handling and Storage	Student Presentations
16	Dec 14	Final 5:00 - 7:00 pm	

<http://www.growingproduce.com/americanfruitgrower/>

<http://www.goodfruit.com/>

<http://www.capca.com>

Reports received by Nov. 20 will be reviewed and comment provided, given a preliminary grade, and returned to you for revision and resubmission. If you are satisfied with your preliminary grade, you needn't resubmit a revised version, and that grade will become the final grade for this assignment. All resubmitted reports, or reports not originally submitted by Nov. 20, must be turned in by Friday, Dec. 4, to be re-graded or receive credit for this assignment. Your resubmitted report should also include the preliminary report that I graded. Normally, revised report receives a higher grade than the original report, so it is usually in your best interest to revise and resubmit.

Written Report: One written report is required. This report is based on a comparison of scientific and trade journal articles. You should first select two articles on a pomological topic of your choice, one from a scientific journal (e.g., *Journal of the American Society for Horticultural Science*, *HortScience*, *HortTechnology*, *Journal of Horticultural Science and Biotechnology*, *Journal of the American Pomological Society*, *Scientia Horticulturae*) and the other from an industry journal (e.g., *Good Fruit Grower*, *American Fruit Grower*, *CAPCA magazine*, *Pacific Nut Producers*). Both articles should be on the same topic, but not necessarily written by the same authors. I recommend consulting with me about the appropriateness of the two articles. In 5-6 pages (with 1" margins, double spaced in 11-point Arial or 12-point Times New Roman fonts), summarize each article (i.e., who, what, where, when, how, and why), then compare and contrast the two articles on the basis of: 1) the concepts they convey, 2) how practical is the information they provide, and 3) their stylistic similarities and differences. References may be used.

The report is to be submitted electronically as an e-mail attachment by Wednesday, Nov. 30. With your report, also include either electronic or photocopies of both articles. The criteria for grading this writing assignment are: 1) 25 points for accuracy, use of the information from the articles, and completeness, including references, if used; 2) 25 points for analysis and comparison of the topic and articles; 3) 25 points for organization and clarity of presentation; 4) 15 points for persuasiveness and validity of conclusions; and 5) 10 points for spelling, grammar, sentence structure, and punctuation.