

Course : Post-harvest Biology and Technology

Course Number: WSU Hort 418/518

Instructor:

Rick Sharpe PhD, Vogel Plant Sciences 130, 509-335-6586 rsharpe@wsu.edu

Lab Instructors:

WSU: Scott Mattinson – dmattinson@wsu.edu

Tri-Cities: Robb Zimmer – robb.zimmer@wsu.edu

Teaching Assistants:

WSU: Seanna Hewitt 509-335-6586 seanna.hewitt@wsu.edu

Schedule: 10:35 T & Th, lab 2:50-5:40 T

Academic Calendar: <http://registrar.wsu.edu/academic-calendar/> - drop dates, fee dates etc.

Course Description:

Catalog states: "Physical and physiological basis for handling and storage practices; perishable organ ontogeny and physiological disorders."

Prerequisites: Hort 202, Biol 420 or equivalent.

Objectives and Course Philosophy

The ultimate goal of this undertaking is to acquaint the students with postharvest biological phenomena; anatomy, development and physiology, in relation to harvesting, handling, storage, and marketing of perishable commodities as well as to enhance the students scientific communications skills.

The Course Objectives Are:

To give the student a capacity for informed decision making and problem solving when confronted with situations involving postharvest physiology.

The student will learn how handling of perishable crops is affected by pre- as well as postharvest factors in their production, resulting in an awareness of the complexity of management decisions.

The student will gain an awareness of physiological phenomena occurring in the postharvest period and how such phenomena influences marketing life.

The student will gain knowledge of how to exploit available resources when confronted with unknown problems.

The student will become acquainted with the ideas of a "systems" approach when dealing with postharvest loss prevention and quality assurance.

The philosophy of the course is to foster the "Postharvest mentality" and make the student realize the importance and magnitude of postharvest physiology in determining end-uses of perishable crops, while realizing the appropriateness of a particular management system for a particular commodity in a particular situation. All of which is to be taken under the overarching concept of "high-quality" retention strategy tailored to fit the crop.

TEXTBOOK: None required: supplemental information will be supplied in the classroom.

Suggested references:

Kays, S. J. and Paull, R.E. Postharvest Biology. Exon Press, Athens GA 568 pages, hardbound, 2004. Out of print.

Teaching Methods

The course will be taught in an open lecture format, attendance will not be recorded, although attendance in class will be necessary for success. Mitigating circumstances preventing class attendance will be assessed on a case to case basis. The only reason you should have for not attending class is if the instructor cannot attend either! Occasional homework assignments may be required.

Grading Policy and Requirements

There will be 3 lecture examinations given during the semester. Each lecture exam will have approximately 70% emphasis on current information since the last test, and balance on information cumulatively assimilated throughout the course. Any information from lectures, reading, any assigned homework, or guest lectures may be used in exams. Because this is primarily a problem solving course, a variety of test questions will be employed. To demonstrate assimilation of technical material, questions involving recall, listing, short answer and definition will be used. To assess comprehension and understanding, discussion questions will be emphasized. The student is expected to organize ideas, thoughts, and factual information in order to present logical, comprehensible answers to discussion-type questions. Proper use of grammar, syntax, and spelling will influence your grade (i.e., NO IM-speak!). The final exam will be comprehensive, and hopefully demonstrate the student's ability to synthesize knowledge gained throughout the semester into logical solutions for problems the postharvest physiologist may confront in "real-world" situations.

Field Trip

A field trip is a mandatory part of this course and is designed to give the postharvest physiology student practical, personal exposure to the storage industry as operated in the state of Washington, plus it's really fun!

Once the field trip is scheduled (26-27 September-tentative and subject to change), please make plans well in advance to make up work in other classes. Discuss this trip with your other instructors early in the semester in order to avoid any misunderstanding. Unfortunately, to keep course fees minimal you will be required to pay for your own meals at a location in Eastern Washington. Room sharing is encouraged. A letter will be available to other instructors to explain the necessity of the field trip and to request your absence from their class. You are responsible for making these arrangements.

Lodging and transportation will be provided. A report detailing the student's observations will be due one week following the completion of the field trip.

Other Course Requirements

Two (2) brief reviews of research articles in the general area of postharvest horticulture, physiology, biochemistry, or pathology are required. These reviews should be no more than two typewritten pages. For further information consult the instructor.

A library research term paper can be used to bolster the student's final grade. Topics of mutual interest to the instructor and student are to be agreed upon by a mid-semester date to be announced in class.

All written material is due at the close of business on the dates shown on the assignment. Assignments and exams will be submitted via Blackboard and due on the dates indicated. Proper writing and communication skills are essential, lack of such will affect your grade. Late submissions will receive a 5% penalty for each day past due.

Regarding assignment due dates: In light of increasing instructor sensitivity to the human condition, each student will receive ONE “get out of jail free” card, which will be distributed when enrollment figures become finalized. **This card is to be used whenever the student needs to submit a late assignment no questions asked.** The card is not transferable, and redeemable if not used prior to the final exam for five (5) extra points added to the student’s final average. It is conceivable that the student could significantly bolster the final grade in this fashion.

Grading weight of each portion of the course:

	Undergraduate	Graduate
Exams (2 ea)	40%	40%
Paper review assignment undergraduates/ Presentation assignment for graduates	20%	20%
Final Exam	27%	27%
Discussion Questions	4%	4%
Field Trip report	9%	9%
Total	100%	100%
Extra credit – paper review (off campus) or attending Academic Showcase (Pullman)	5%	5%

Grading will be based upon a percentage basis:

A 94-100 B+ 87-89 C+ 77-79 D+ 67-69 F < 60
 A- 90-93 B 84-86 C 74-76 D 60-66
 B- 80-83 C- 70-73

Disability Statement:

“Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Disability Resource Center (DRC-<http://www.drc.wsu.edu>). All accommodations MUST be approved through the DRC (Washington Building, Room 217). Please stop by or call 509-335-3417.” Tri-Cities resource: <http://www.tricity.wsu.edu/disability/> West Bldg 269 372-7352

Safety Policy:

Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises.

Please, go to:

WSU Pullman Campus Safety Plan at: <http://safetyplan.wsu.edu>

WSU Emergency Management web site: <http://oem.wsu.edu/emergencies>

WSU Tri-Cities Campus Safety Plan at: <http://www.tricity.wsu.edu/disability/>

Plagiarism policy: “Don’t Cheat, or it will cost you!” Seriously, Plagiarism is a form of cheating, which involves knowingly passing of the writing work of others as your own. If you would like a more in-depth definition of plagiarism, please consult the following web site: <http://libraries.wsu.edu/library-instruction/plagiarism>. All plagiarism is cheating but not all cheating is plagiarism. Cheating (using text-messaging or crib notes for test answers, etc.) is also prohibited. Students caught cheating will fail the test in question and will be reported to the Office of Student Affairs. Any student who violates the University's standard of conduct relating to academic integrity will be referred to the Office of Student Conduct and may fail the assignment or the course. You can learn more about Academic Integrity on your campus using the URL listed in the Academic Regulations section or at <http://conduct.wsu.edu/academic-integrity-policies-and-resources>. Please use these resources to ensure that you don’t inadvertently violate WSU's standard of conduct.