

Course Syllabus

[Home Page \(https://wsu.instructure.com/courses/1734076/\)](https://wsu.instructure.com/courses/1734076/)

WSU Hort/CSS 418/518

Postharvest Biology and Technology

Where: Pullman: Clark Hall 151

AMS: Tri-Cities - Ste. Michelle Wine Science Center, room 202, Wenatchee - Tree Fruit Research and Extension Center

Instructor:

Rick Sharpe, PhD, Clark 239, phone number 509-335-3603, [email \(mailto:rsharp@wsu.edu\)](mailto:rsharp@wsu.edu):
rsharp@wsu.edu

Office hours – Wednesday and/or Thursday from 3:00pm to 4:00pm. I will have Zoom available during these times. You can always email me if you would like to set up an appointment, whether in person or on Zoom, if the Wednesday or Thursday times do not work for you.

Teaching Assistant: Jeremy Ree, [jeremy.ree@wsu.edu \(mailto:jeremy.ree@wsu.edu\)](mailto:jeremy.ree@wsu.edu)

Schedule: Discussion time Tuesdays and Thursdays 10:35AM - 11:25AM in Clark 151, Pullman lab (Vogel 39) Tuesdays 2:55PM - 5:45PM & Fridays 9:10AM - 12:00PM. Tri-Cities lab (Wine Center 206): Wednesdays 4:10PM – 7:00PM.

Academic Calendar [📅 \(https://registrar.wsu.edu/academic-calendar/\)](https://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/CROP SCI 202 Crop Growth and Development, BIOL 420 Plant Physiology or equivalent.

Objectives and Course Philosophy

The ultimate goal of this undertaking is to acquaint the student 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 student's 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 influence 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.

Discussions – discussions will all be broadcast over AMI, Zoom, and recorded to facilitate asynchronous availability of what we have discussed. Yes, I do have to make sure you and our instructor team have engaged meaningful conversation, so there will be essays in exam form and writing exercise form. (I just had to use that term because we assay various commodities ... yeah I know Dad joke ... I have a habit of doing this). This is a writing in the major course which means you need to be able to communicate by the written word as well as on various media apps.

Labs - Labs will focus on introduction to assess different aspects of postharvest biology via experimental techniques, discussions resulting from the exercise, and how to properly report and interpret data relating to the concepts discussed in class. Writing assignments will be associated with the various labs designed to enhance the student's confidence in the craft of scientific communication. The emphasis on types of equipment and assays, as well as to how to effectively communicate results, is a major tool to have in your tool belt. The capability to compile data and effectively communicate the results will aid you in any field of your choosing.

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, 2 lecture exams and 1 final exam, given during the semester. Each lecture exam will have approximately 70% emphasis on current information since the last exam, and the final exam will be on information cumulatively assimilated throughout the course. **Any information** presented from lectures, labs, readings, 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 (e.g., 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 (the last half of September, dependent on harvest and facility availability and schedules), please make plans 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. For Pullman student's hotel and transportation will be provided in the Tri-Cities area. Room sharing is a necessity unless otherwise cleared by the instructor. A letter (LoAR) will be made available to other instructors to explain the necessity of the field trip and to request your absence from their class on request (some instructors require the LoAR and some do not). You are responsible for making class absence arrangements as well as a LoAR request with your other instructors. PDFs of the LoAR paperwork can be found here: **[Forms \(https://wsu.instructure.com/courses/1734076/pages/forms\)](https://wsu.instructure.com/courses/1734076/pages/forms)**

A trip 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 unless changed by the Instructor. These reviews should be no more than two typewritten pages. Additional information regarding these assignments will be discussed during the course of the semester.

Extra credit: 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 no later than one week after mid-term grades have been posted!** After this deadline no extra credit assignment topics will be entertained. It is the student's responsibility to be aware of the current status of their grade and make the decision to enter into an extra credit assignment.

All written material is due at the beginning of class (10:30am) on the due dates shown on the assignment. Assignments and exams will be submitted via Canvas 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** unless otherwise approved by the instructor.

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 available when enrollment figures become finalized. **This card is to be used whenever the student needs to submit a late assignment no questions asked.** Exams are not eligible for card use. 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 total points. It is conceivable that the student could significantly bolster the final grade in this fashion.

Grading weight of each portion of the course:

Category	Undergraduate	Graduate
Exams (2 ea)	39%	39%
Paper review assignment	10%	10%
Lab Assignments	20%	20%*

Final Exam	27%	27%
Discussion Questions & Field Trip report	4%	4%
Total	100%	100%
Extra credit – paper review (cleared by the instructor)	5%	5%
*Graduate students participation in the Lab section is modified by these criteria: the 1st 2 labs are required. The remaining 80% of lab points will be to turn in a report on their individual & current research. Additional information will be disseminated in additional meetings.		

Grading will be based upon a percentage basis – the instructor does retain the right to adjust an elevation of a grade due to class participation, perceived attendance and extra work/credit by the student :

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

Use of AI tools and programs. Course policy on AI use can be found [here "Use of AI" \(https://wsu.instructure.com/courses/1734076/files/122818563?wrap=1\)](https://wsu.instructure.com/courses/1734076/files/122818563?wrap=1) ↓ (https://wsu.instructure.com/courses/1734076/files/122818563/download?download_frd=1)

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](https://www.drc.wsu.edu/) ↗ (<https://www.drc.wsu.edu/>). All accommodations MUST be approved through

the DRC. Please stop by or call 509-335-3417.” [Tri-Cities Disability resources](http://www.tricity.wsu.edu/disability/) [\(http://www.tricity.wsu.edu/disability/\)](http://www.tricity.wsu.edu/disability/); phone number : 509-372-7352

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 the links below:

[WSU Pullman Campus Safety Plan](https://safetyplan.wsu.edu/) [\(https://safetyplan.wsu.edu/\)](https://safetyplan.wsu.edu/)

[WSU Emergency Management web site](http://%20https://oem.wsu.edu/%20) [\(http://%20https://oem.wsu.edu/%20\)](http://%20https://oem.wsu.edu/%20)

[WSU Tri-Cities Campus Safety Plan](https://tricity.wsu.edu/safety/) [\(https://tricity.wsu.edu/safety/\)](https://tricity.wsu.edu/safety/)

Follow the provided links for [WSU Academic Regulations](https://registrar.wsu.edu/academic-regulations/) [\(https://registrar.wsu.edu/academic-regulations/\)](https://registrar.wsu.edu/academic-regulations/) and the [State of Washington Standards of Conduct for Students](http://apps.leg.wa.gov/WAC/default.aspx?cite=504-26) [\(http://apps.leg.wa.gov/WAC/default.aspx?cite=504-26\)](http://apps.leg.wa.gov/WAC/default.aspx?cite=504-26).

Plagiarism policy: “Don’t Cheat, or it will cost you!” Seriously, Plagiarism is a form of cheating, which involves knowingly passing of the written work of others as your own. If you would like a more in-depth definition of plagiarism, please consult the following web site [here](http://libraries.wsu.edu/library-instruction/plagiarism) [\(http://libraries.wsu.edu/library-instruction/plagiarism\)](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 the WSU Academic Integrity [website](http://conduct.wsu.edu/academic-integrity-policies-and-resources/) [\(http://conduct.wsu.edu/academic-integrity-policies-and-resources/\)](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.

In addition to resources like academic and career advising as well as tutoring being delivered remotely, WSU is launching a new hotline for academic questions:

The number to call will be 509-335-6000. The hotline will be staffed by the Academic Success and Career Center weekdays from 8 a.m. to 5 p.m. An email channel is also being created that will enable

students to submit questions nights and weekends. Additional information can be found at this [announcement page](https://vcea.wsu.edu/student-success/2020/08/04/wsu-launches-new-academic-questions-hotline/)  (<https://vcea.wsu.edu/student-success/2020/08/04/wsu-launches-new-academic-questions-hotline/>).

COVID-19 Statement

All current COVID-19 related university policies and public health directives are located at <https://wsu.edu/covid-19/>  (<https://wsu.edu/covid-19/>). Students who choose not to comply with these directives may be required to leave the classroom; in egregious or repetitive cases, student non-compliance may be referred to the Center for Community Standards for action under the Standards of Conduct for Students.

University Syllabus

Students are responsible for reading and understanding all university-wide policies and resources pertaining to all courses (for instance: accommodations, crisis resources, policies on discrimination or harassment), which can be found in the university syllabus:

<https://syllabus.wsu.edu/university-syllabus>  (<https://syllabus.wsu.edu/university-syllabus>)