

**POSTHARVEST PHYSIOLOGY AND HANDLING LABORATORY (2) PLANT BIOLOGY 172L
FALL QUARTER**

COURSE GOALS:

1. To familiarize students with the techniques used in the laboratory and in industry to evaluate factors affecting the postharvest life of harvested perishable crops.
2. To demonstrate the application to specific commodities of some of the techniques used commercially to maintain quality of fresh horticultural commodities between harvest and use by consumers.

TEXT USED:

None. Detailed notes will be distributed before each laboratory exercise.

ENTRY LEVEL:

Designed for upper division undergraduates and graduate students in the plant and food sciences, but open to other interested students; can be taken concurrently with or subsequent to Plant Biology 172 or its equivalent.

COURSE FORMAT:

Weekly discussion-laboratory sessions of 4 hours each. Students spend an additional 2 to 3 hours per week in monitoring laboratory experiments. Grade will be based on participation in lab exercises and discussions, and on written and oral laboratory reports.

TOPICAL OUTLINE:

1. Physical, chemical and subjective means of determining quality.
2. Data summarization and analysis, preparation of research reports.
3. Gas mixing and analysis, measurement of respiration and ethylene production.
4. Effects of temperature on respiration, ethylene production and quality.
5. Effects of physical factors on respiration, ethylene production and quality.
6. Effects of ethylene on respiration and quality.
7. Commodity and environmental factors involved in water loss.
8. Pathological deterioration of horticultural commodities.
9. Methods of cooling; measurement of temperature, pressure, and air velocity.
10. Oral presentations and discussion.

DATE REVISED: September 1998

**INSTRUCTORS: A. A. Kader (Pomology)
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