

HOS 5330 Postharvest Technologies for Horticultural Crops
 Thursdays, Periods 9, 10 (4:05 – 6:00 PM), 2318 Fifield Hall; via Zoom for off-campus students

Instructors:
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LECTURE SCHEDULE: Spring 2024 Semester

| Class Meeting Dates and Topics (Assignments & Due Dates) | Reading Assignments for Next Lecture (USDA Handbook 66)** | Other Assignments for Next Lecture |
|---|---|---|
| January 11 Course overview (SAS) Postharvest Losses; Postharvest Physiology & Quality for Horticultural Crops (MAR) | 1) Postharvest Biology (handout-Kader Ch. 4) 2) Respiratory Metabolism (p. 68) 3) Nutritional Quality-Importance in Human Health (p. 166) | Reference materials are available on the course website: http://irrec.ifas.ufl.edu/postharvest/HOS5330.shtml |
| January 18, 25 – No Class Meeting | 1) Postharvest Pathology (p. 111) 2) Temperature Treatments (p. 26) 3) Chilling & Freezing Injury (p. 62) 4) Harvest and Handling (handout-EDIS pub) | |
| February 1 Harvest, Handling and Storage Operations (MAR) Transportation (MAR) | 1) Precooling and Storage (p.11) 2) Ethylene Effects (p. 76) 3) 1-Methylcyclopropene (p. 83) | Divide into teams; hand out technical report topics |
| February 8 Temperature Management During Harvest, Handling and Shipping (SAS) Mechanization of Hort. Crops (SAS) | 1) Controlled Atmosphere Storage (p. 22) 2) Modified Atmosphere Packaging (p. 42) 3) Heat Load Calculation (p. 19) | Teams select technical report topics |
| February 15 Minimizing Produce Injury During Harvest & Handling (SAS); Systems Analysis (SAS) Incorporating AI in harvest and postharvest operations (Z Boz) | 1) Flavor (p. 128) 2) Texture (p. 89) 3) Food Safety (p. 149) | Conduct literature review on technical report topic Work on technical report outline, due February 29 |
| February 22 Postharvest Treatments (MAR) Sanitation and Food Safety (KR Schneider) | 1) Wholesale Distr. Center Storage (p. 54) 2) Grocery Store Display Storage (p. 59) 1) Fresh-cut Fruits (p. 604) 2) Fresh-cut Vegetables (p. 624) | |

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| February 29 Fresh-cut fruits and vegetables (JK Brecht) Optional topic | 3) Bedding Plants and Seedlings (p. 642) 4) Cut Flowers and Greens (p. 659) | Technical Report Outlines due |
| March 7 Field trip to local supermarket produce department (SAS) | | |
| March 11-15 Spring Break Field Trip: Central & Southwest Florida | | Work on trip journals, technical report draft |
| March 21 Post-trip discussion session | | Work on trip journals |
| March 28 – No class | | |
| April 4 – No class | | Field trip journals due |
| | | Work on technical report |
| April 11 – No class | Instructors available to discuss questions about final report | Work on technical report |
| April 18 – Class meets. Oral Presentations Course wrap-up; online course evaluations | | Technical reports due Oral presentations Bring both on USB drive |
| April 25 – No class (Reading days) End of semester | | |
| **U.S.D.A. Agriculture Handbook 66. The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks. (Updated August 2016) K.C. Gross, C.Y. Wang and M. Saltveit (eds.). | | |

Grading and Deadlines:

February 29: Technical Report Outlines Due

April 4: Field Trip Journals Due
 Description: 15
 Organization/Illustrations: 15
 Total: 30 points

April 18: Technical Reports Due
 Introduction: 5
 Description: 10
 Discussion/Analysis: 20
 Summary/Conclusions: 5
 Total: 40 points

April 18: Oral Presentations (5 points/component)

Introduction
 Description of the technology
 Discussion/Analysis
 Summary
 Graphics/readability
 Delivery style
 Total: 30 points

In-class and Field Trip Participation: 10 points
Course Total: 110 points

| SPRING SEMESTER 2024 | | | | | | | |
|----------------------|----|--------------------------|----|----|--------------------|-------------------|---|
| | S | M | T | W | T | F | |
| Jan. | | Holiday 1 | 2 | 3 | 4 | Registration 5 | |
| | | ----- Drop/Add ----- | | | | | 6 |
| | 7 | 8 | 9 | 10 | 11 | 12 | |
| | 14 | Holiday 15 | 16 | 17 | 18 | 19 | |
| | 21 | 22 | 23 | 24 | 25 | 26 | |
| | 28 | 29 | 30 | 31 | | | |
| Feb. | | | | | 1 | 2 | |
| | 4 | 5 | 6 | 7 | 8 | 9 | |
| | 11 | 12 | 13 | 14 | 15 | 16 | |
| | 18 | 19 | 20 | 21 | 22 | 23 | |
| | 25 | 26 | 27 | 28 | 29 | | |
| Mar. | | | | | | 1 | |
| | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | ----- Spring Break ----- | | | | | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | |
| | 17 | 18 | 19 | 20 | 21 | 22 | |
| | 24 | 25 | 26 | 27 | 28 | 29 | |
| | 31 | | | | | | |
| Apr. | | 1 | 2 | 3 | 4 | 5 | |
| | 7 | 8 | 9 | 10 | 11 | 12 | |
| | 14 | 15 | 16 | 17 | 18 | 19 | |
| | 21 | 22 | 23 | 24 | Reading Days 25 | 26 | |
| | 28 | 29 | 30 | | | 27 | |
| May | | | | | | Commencement 1 | |
| | | | | | | 2 | |
| | | | | | | 3 | |
| | | | | | | 4 | |
| | 5 | 6 | 7 | 8 | 9 | 10 | |
| | | | | | | 11 | |