# HOS 5330 Postharvest Technologies for Horticultural Crops

**Thursdays, Periods 9, 10 (4:05 – 6:00 PM), 2318 Fifield Hall**

**Instructors:**
- Dr. Steven A. Sargent ([sasa@ufl.edu](mailto:sasa@ufl.edu))
- Dr. Mark A. Ritenour ([ritenour@ufl.edu](mailto:ritenour@ufl.edu))
- Dr. Armitra Jackson-Davis ([armitra.davis@aamu.edu](mailto:armitra.davis@aamu.edu))
- Dr. Lamin Kassama ([Lamin.Kassama@aamu.edu](mailto:Lamin.Kassama@aamu.edu))

## LECTURE SCHEDULE: Spring 2023

<table>
<thead>
<tr>
<th>Class Meeting Dates and Topics (Assignments &amp; Due Dates)</th>
<th>Reading Assignments for Next Lecture (USDA Handbook 66)**</th>
<th>Other Assignments for Next Lecture</th>
</tr>
</thead>
</table>
| January 12  
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](http://irrec.ifas.ufl.edu/postharvest/HOS5330.shtml) |
| January 19, 26 – No Class Meeting | 1) Postharvest Pathology (p. 111)  
2) Temperature Treatments (p. 26)  
3) Chilling & Freezing Injury (p. 62) |  |
| February 2  
Temperature Management During Harvest, Handling and Shipping (SAS) | 1) Harvest and Handling (handout-EDIS pub)  
2) Precooling and Storage (p.11)  
3) Ethylene Effects (p. 76)  
4) 1-Methylcyclopropene (p. 83) |  |
| February 9  
Harvest & Handling Operations (MAR) | 1) Controlled Atmosphere Storage (p. 22)  
2) Modified Atmosphere Packaging (p. 42)  
3) Heat Load Calculation (p. 19) | Select individual technical report topic. Divide into field trip teams |
| February 16  
Minimizing Produce Injury During Harvest & Handling (SAS) Systems Analysis (SAS) | 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 March 2 |
| February 23  
Sanitation and Food Safety (AJ-D) | 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) |  |
| March 2  
>Value-added (fresh-cut; processing-juice, frozen, drying) (LK)? | 3) Bedding Plants and Seedlings (p. 642)  
4) Cut Flowers and Greens (p. 659) | Technical Report Outlines due |
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 9</td>
<td>Field trip to local supermarket produce department (SAS)</td>
<td></td>
</tr>
<tr>
<td>March 13-17</td>
<td>Spring Break Field Trip: Central &amp; South FL</td>
<td>Work on trip journals, technical report</td>
</tr>
<tr>
<td>March 23</td>
<td>Post-trip discussion session</td>
<td>Work on trip journals</td>
</tr>
<tr>
<td>March 30 –</td>
<td>No class</td>
<td></td>
</tr>
<tr>
<td>April 6 –</td>
<td>No class</td>
<td>Field trip journals due</td>
</tr>
<tr>
<td>April 13 –</td>
<td>No class</td>
<td>Work on technical report</td>
</tr>
<tr>
<td>April 20 –</td>
<td>Class meets.</td>
<td>Instructors available to discuss questions about final report</td>
</tr>
</tbody>
</table>
Grading and Deadlines:

March 2: Technical Report Outlines Due

April 6: Field Trip Journals Due
Description: 15
Organization/Illustrations: 15
Total: 30 points

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

April 20: 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