

# **Postharvest Technologies for Horticultural Crops**

## **HOS 5330, Section 0101**

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

### **Spring 2016 Syllabus**

#### **Instructors**

Steven A. Sargent, Ph.D.  
Professor

#### **Office**

Horticultural Sciences Department  
1211 Fifield Hall, campus  
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Mark A. Ritenour, Ph.D.  
Associate Professor

Indian River Research & Education Center  
2199 S. Rock Road, Ft. Pierce FL 34945  
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#### **Office Hours – Sargent and Ritenour:**

Thursdays 3:00-3:45 PM on class days, or by appointment.

**Course Technical Assistant:** Adrian Berry, adberry@ufl.edu

#### **Course Website**

Materials, resources and assignments will be accessible at:

<http://irrec.ifas.ufl.edu/postharvest/HOS5330.shtml>

#### **Catalog Description**

*Prerequisite:*

*HOS 5085 suggested. Open to graduate students, and to upper-division undergraduate students (with instructor consent).*

*Description:*

*Intensive study of current technologies and procedures for harvesting and handling fresh fruit, vegetable, and ornamental crops grown in Florida. Requires field trip during spring break. Offered spring semesters.*

#### **Course Learning Objectives**

- 1) To familiarize students with the current commercial methods used to harvest, pack, transport and market fresh horticultural crops grown in Florida, with emphasis on maintaining product quality and safety.
- 2) To prepare students to systematically evaluate and critically analyze these operations based on field trip experiences and course assignments.

#### **Course Format, Expectations and Evaluation**

The class will meet weekly prior to a 5-day field trip to central and south Florida during Spring Break. Students will self-divide into interdisciplinary teams and will work together to write a field trip journal. The field trip will provide students with first-hand experience with principles of postharvest physiology and the technologies used to maintain quality and food safety of fresh

fruits and vegetables from harvest through packing, handling and transportation. Each student will also select a topic related to postharvest technology and physiology and write an individual technical report.

*Lecture Topics and Field Trips:*

1. Postharvest Losses and Systems Analysis; Produce Quality
2. Postharvest Physiology for Horticultural Crops
3. Harvest and Handling Operations; Temperature Management
4. Storage and Shipping Operations; Postharvest Treatments
5. Sanitation and Food Safety
6. Field trip to local supermarket produce department
7. Spring Break field trip
8. In-class review/discussion of field trip

*Course grading:*

- During the field trip students will maintain a written log of observations for each visit. Observations should include pertinent information including a description of the operation visited, crops, handling methods, and their impacts on quality. Afterwards the team will prepare a written journal (pdf file) that collates team members' observations in a neatly organized and illustrated manner. (50% of grade)
- Each student will develop and write a technical report on a predetermined technology using examples and details observed during the field trip and pertinent literature. The goal of the technical report is to describe how fresh produce quality is maintained (or lost) by the appropriate use (or misuse) of the selected technology. (50% of grade)
- In-class participation in group assignments and discussions is critical to successful completion of this course.

All assignments will be submitted in pdf format for grading and will be returned at the end of the semester.

**Reference Text (online)**

U.S. Dept. of Agriculture Handbook 66. The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks. (Updated August 2014) K.C. Gross, C.Y Wang and M. Saltveit (eds.). <http://www.ba.ars.usda.gov/hb66/contents.html>

**Recommended Text**

Kader, A.A. (Ed.). 2002. Postharvest Technology of Horticultural Crops. Third Edition. Publication 3311. University of California, Division of Agriculture and Natural Resources. Oakland CA.

Supplemental materials will be provided by the instructors as necessary.

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## **Grades and Grade Points**

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

## **Attendance and Make-Up Work**

Class attendance and field trip participation are required. University policies can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

## **Online Course Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

## **Academic Honesty, Software Use, UF Counseling Services and Services for Students with Disabilities**

### **Grades and Grade Points**

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### **Absences and Make-Up Work**

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

### **Academic Honesty**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

## **Software Use**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

## **Campus Helping Resources**

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/)
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Training Programs
  - Community Provider Database
- Career Resource Center, First Floor JWRU, 392-1601, [www.crc.ufl.edu/](http://www.crc.ufl.edu/)

## **Services for Students with Disabilities**

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)