

## Course offering: TROPICAL FRUIT PRODUCTION AND RESEARCH

Code: HOS 5555; 3 credits

Dates: 28 June to 5 August 2022

Instructor: Dr. Jonathan H. Crane, Tropical Fruit Crop Specialist



### University of Florida, IFAS Tropical Research and Education Center

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For more information:

<https://trec.ifas.ufl.edu/teaching/tropical-fruit-production-and-research-hos5555/>

#### Target audience

This course offers undergraduate and graduate students, scientists, extension faculty, and other professionals (including experienced producers) an opportunity to increase their knowledge of tropical fruit crop horticulture and physiology.

#### Course location

The commercial tropical fruit crops industry of Florida is diverse and dynamic. The marine subtropical climate of peninsular Florida allows for the production of subtropical and tropical fruit crops. The numerous environmental stresses encountered in southern Florida (e.g., drought, floods, hurricanes, freezing temperatures) have been challenged successfully by producers and have provided a unique opportunity for University of Florida scientists to conduct applied and basic research on tropical fruit crops.

The course is taught at the Tropical Research and Education Center (TREC), Homestead, Florida, which is the only state supported tropical agricultural research center in the continental U.S.A. The research center is located on 65 ha and has offices, greenhouses, growth chambers, vegetable fields, and fruit orchards. There are 17 faculty members including horticulturists, environmental and molecular plant physiologists, entomologists, plant pathologists, plant breeders, an agricultural economist, a hydrologist, an agroecologist, biogeochemist, economist and a soil and water scientist involved in research on traditional and tropical vegetable crops, ornamental crops, natural resources, and tropical/subtropical fruit crops.

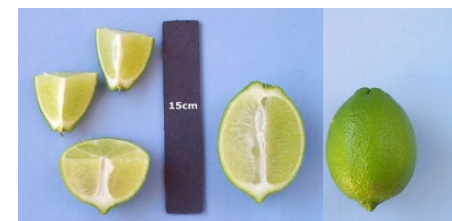
The station regularly hosts graduate students, post docs, and visiting scientists. The TREC campus and the surrounding agricultural area provide an ideal environment for the study of tropical fruits.

#### Objectives of the class

1. To learn about horticultural practices for tropical fruit crop management, with emphasis on commercial crops grown in Florida. Aspects of applied research, and the physiological basis for horticultural practices used in crop production will be discussed.
2. To expose students to production practices and relevant current research through guest lectures, field visits to working orchards, nurseries, packinghouses, botanical gardens, and research/education institutions.
3. To instill an understanding and ability to apply the principles, concepts, and information from the class to production, research, and teaching situations relevant to each student.

#### Methods for teaching

- Formal lectures, as well as, informal discussions and question periods.
- Written literature, PPT presentations, and videos will be used to enhance lectures and discussions.
- Field visits to interact with production researchers, managers, orchardists, researchers, and extension faculty.



### Brief Course Description

Classes will be held Monday through Friday, beginning at 8:30 AM and ending between 4:00 PM to 7:00 PM daily. Typically, class lectures will be held in the mornings and field trips to commercial orchards, nurseries, and educational/research institutions will be made in the afternoon. In addition, video conferencing and use of the internet may be used to provide students and faculty opportunities to interact without the limitations of geographical distance. There will be at least one 2-day trip to the west coast of Florida production area.

The course will emphasize applied research, the physiological basis for horticultural practices for commercial tropical fruit crop production in Florida. Crops to be studied include avocado, mango, carambola, dragonfruit, papaya, lychee, longan, mamey sapote, passion fruit, pitaya, sapodilla, sugar apple, guava and others. Subject matter will include crop adaptation and selection, orchard establishment, environmental stress physiology, applied crop physiology, and modern production methods. Guest lectures offered on tissue culture/biotechnology, insect and disease management, hydrology, agricultural economics, agroecology, soils-water management, plant physiology, postharvest handling, genetics and plant breeding.

### Accommodations and Transportation

Students must arrange their own transportation to and from Homestead, Florida at the beginning and end of the course. If there is space, registered, degree-seeking UF students may stay on the TREC campus in student housing (it fills up fast so don't hesitate). Unfortunately, no rooms will be available for non-UF students. There are many motels in the Homestead

area, with a wide range in prices. To view, web-search 'hotels homestead florida'. You may wish to share a room with another student - those arrangements can be made during the first day of class. There are also accommodations at the Hoosville Hostel (<https://www.hoosvillehostel.com/>) in Florida City – 5.2 miles from TREC. You must contact the hostel directly and inform them of your arrival and departure dates. Make arrangements ahead of your arrival. The email address is [michaelhoo@hoosvillehostel.com](mailto:michaelhoo@hoosvillehostel.com) and phone 305-363-4644. Please contact me if you will be staying at the hostel.

### Student Qualifications

This course is designed for individuals with agricultural (e.g., horticulture, agronomy, botany) degrees and/or agricultural experience. All participants need to be competent in English. Further information on this course may be viewed at the web site

<http://trec.ifas.ufl.edu/research/tropical-fruit-production-and-research-hos5555/>

### Course Fees and Registration

- Students currently enrolled in the University of Florida should go through the usual procedures for registration and payment of fees in Gainesville.
- Non-degree students visit <https://cals.ufl.edu/current-students/non-degree-seeking/> and <https://registrar.ufl.edu/registration/transients.html>
- Auditing (including residents >60 years-old) <https://catalog.ufl.edu/UGRD/academic-regulations/registration-policies/#auditingcoursestext>

### Course Fees and Registration – cont.

- Non-degree students not enrolled at UF may register through <https://registrar.ufl.edu/registration/transients.html>
- as non-degree student. For questions, contact the Registrar at 352-392-1374 or <https://registrar.ufl.edu/> or Curtis Smyder at 352-273-4781 or [curtisr@ufl.edu](mailto:curtisr@ufl.edu). Course fees:

<u>Student status</u>	<u>Est. Cost*</u>
<u>In-state</u>	<u>\$1,592.07</u>
<u>Out-of-state</u>	<u>\$3,766.23</u>
<u>Florida residents 60+years-old auditing the course</u>	<u>All fees waived</u>

\* , estimated as of 2-2022 and **subject to change**  
Please contact Dr. Crane if you have any questions at tel: 786-217-9271 or email, [jhcr@ufl.edu](mailto:jhcr@ufl.edu)



Recommended textbooks (~\$60-\$100+ each):

- Tropical Fruits, Vol. 1 (2<sup>nd</sup> edition). RE Paull and O. Duarte (CABI International)
- Tropical Fruits, Vol. 2 (1<sup>st</sup> edition), RE Paull and O. Duarte (CABI International).

Potentially available on-line:

- Amazon <http://amazon.com>
- CABI <https://www.cabi.org/>
- nhbs <http://www.nhbs.com>
- Google ebook <http://books.google.com>

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