HOS 4932: Nutrient Management for Container-Grown Crops (Introduction)
1 Credit-Hour
The course can alternatively be taken through UF IFAS Extension as a non-credit online course through the UF QuickReg system https://reg.distance.ufl.edu/reg/.

Prerequisites: Students must be at Junior or Senior level in a B.S. program in Plant Science or Horticultural Science, and should ideally have taken a course in plant propagation, nutrition, or greenhouse and nursery management.

Instructors: Paul Fisher, Environmental Horticulture Dept., 2549 Fifield Hall, (352)273-4581, pfisher@ufl.edu; Rosanna Freyre, Environmental Horticulture Dept., 2551 Fifield Hall, (352)273-4575, rfreyre@ufl.edu.

Course description: This is a professional development course on nutrient management for container-grown crops intended for students who have limited formal training in greenhouse horticulture. Lectures and assignments are in both English and Spanish.

Course learning objectives: Students who take this course will be able to list the essential nutrients for plant growth; interpret a fertilizer label; understand fundamentals of managing pH and fertilizer level; perform substrate-pH and electrical conductivity (EC) tests; and identify and prevent pH and EC-related problems.

Weekly course schedule:

<table>
<thead>
<tr>
<th>Module</th>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>1</td>
<td>Aug 24-28</td>
<td>Overview and common nutrient problems</td>
<td>Pre-test of existing knowledge</td>
</tr>
<tr>
<td>1.2</td>
<td>2</td>
<td>Aug 31-Sep 4</td>
<td>Supplying essential nutrients</td>
<td>Quiz on common nutrient problems</td>
</tr>
<tr>
<td>1.3</td>
<td>2</td>
<td>Aug 31-Sep 4</td>
<td>Fertilizer types</td>
<td></td>
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<tr>
<td>1.4</td>
<td>3</td>
<td>Sep 7-11</td>
<td>Interpreting a fertilizer label</td>
<td>Review fertilizers being used at your location and interpret a label</td>
</tr>
<tr>
<td>1.5</td>
<td>4</td>
<td>Sep 14-18</td>
<td>Managing total nutrient level</td>
<td>Sep 19 Lab (A) Hydroponics</td>
</tr>
<tr>
<td>1.6</td>
<td>4</td>
<td>Sep 14-18</td>
<td>Acidity and basicity – the importance of pH</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>5</td>
<td>Sep 21-25</td>
<td>Onsite testing of pH and EC</td>
<td>Sep 26 Lab (B) Test the pH and EC of samples and interpret results. Final course evaluation.</td>
</tr>
</tbody>
</table>

Critical course dates: The course will run August 24 to Sept. 26 2015 (online through Canvas). Participants can access lessons and assignments on any day or time during the month of the course as soon as modules appear as active in the UF Canvas learning environment after August 24. Chat hours will be Tues and Thurs 3.30 to 5 pm ET. There is a required pre-test, and a course evaluation at the end. There are seven streaming video lessons, two face-to-face labs, and three assignments (see table above). The assignments have due dates:
Pre-test: Aug 28 2015
Quiz on common nutrient problems: Sep 4 2015
Interpret a fertilizer label: Sep 11 2015
Onsite testing of pH and EC; Final course evaluation: Sep 25 2015
Required face-to-face instruction hours at Gainesville Environmental Horticulture Dept. Greenhouse Facility Sept 19 and Sept. 26, 9 am to 12 pm (noon). No exceptions.

Recommended text book: None

Grading: Will be based on the assignments Quiz on common nutrient problems, Interpret a fertilizer label and Onsite testing of pH and EC, plus class participation.

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 will have the opportunity 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. It is expected that you will contribute your feedback for this course and the others in which you are enrolled this term. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

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/process/student-conduct-honor-code.

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.

Services for Students with Disabilities
The Disability Resource Center coordinates the needed accommodations of students with disabilities (0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc). 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.

**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/)

**Additional information**

Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See [http://distance.ufl.edu/student-complaints](http://distance.ufl.edu/student-complaints) for more details.