UNIVERSITY OF FLORIDA
Horticultural Sciences Department
VEC 2100 Fall 2015
World Herbs and Vegetables

Instructor: Bala Rathinasabapathi, Ph.D.
Room 2247 Fifield Hall
Phone 352-273-4847
Section 5368
Lecture:
Tue 10th period (5:10 PM – 6 PM);
Thu 10th and 11th period (5:10 PM – 7:05 PM)
Room 330, Larson Building, Center Dr [http://campusmap.ufl.edu/]
Lab: Take-home Projects, Hands on Activities and Writing.

Office hours: By Appointment; e-mail brath@ufl.edu
Course Homepage: http://www.hos.ufl.edu/sabaweb

Optional Textbooks:

Notes & additional reading will be distributed via electronic list-serve.

Other References:
Articles from Florida Cooperative Extension Service and technical journals (Journal of the American Society of Horticultural Science, Economic Botany, Phytochemistry, Hortscience, and American Vegetable Grower)

Objective:
Students will learn about the history, properties, uses, genetics and cultivation tips for a variety of culinary herbs and vegetables from around the world.
Learning Outcomes:
By the end of the semester, the conscientious student should be able to
- Explain various classifications of vegetables and plants, parts of edible plants, origin and family characteristics for major vegetables
- Identify common and uncommon vegetables, herbs and spices
- Find information on the uses and nutritional value of vegetables and herbs
- Explain biological principles behind genetic improvement of crops
- Discuss current problems in the cultivation and use of vegetables and herbs
- Propagate and cultivate a vegetable garden
- Know how to critically analyze research on vegetables and herbs

Format:
3-credit course for majors and non-majors.

Assignments:
(a) Students will be assigned several activity-oriented mini-projects. The students need to turn in an activity report on each of them. (b) There will be one writing assignment for each student and one class presentation assignment for groups of two students. The activities are designed to encourage critical thinking and communication skills and expose the students to current topics in this area.

Evaluation:
Students will be evaluated based on the following:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class attendance &amp; participation (25 lectures)</td>
<td>100</td>
<td>(20%)</td>
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<tr>
<td>Essay (1 total)</td>
<td>100</td>
<td>(20%)</td>
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<tr>
<td>Activity reports (6 total)</td>
<td>100</td>
<td>(20%)</td>
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<tr>
<td>Class presentation (1 total)</td>
<td>100</td>
<td>(20%)</td>
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<tr>
<td>Tests (2 total)</td>
<td>100</td>
<td>(20%)</td>
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<tr>
<td>TOTAL</td>
<td>500</td>
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* Letter grades for the course will be assigned according to the chart below:
  90-100 = A   87-89 = A-; 84-86 = B+; 80-83 = B; 77-79 = B-; 74-76 = C+;
  70-73 = C; 67-69 = C-; 64-66 = D+; 60-63 = D; 57-59 = D-; 56-below = E.

* Class attendance will be marked each day either at the beginning or end of the class period.
* There is no final exam in this course.

Course policies and procedures

1. Homework: Reports are due on the dates indicated in the instructions for each activity. Late homework will be accepted with a 20% penalty for each day after the due date. If you are having trouble with homework or class, please see me immediately.
2. Test makeups will be arranged only in the case of an emergency and not for absences for any other reasons.

3. Follow all safety regulations in and out of the classroom. Opportunities will be available for students to taste novel and unusual vegetables. Food tasting is optional and personal safety is individual’s responsibility.

4. By registering for classes, every student has signed the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty, and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University”. Honor Code violations in this course will not be tolerated, and may result in the assignment of a failing grade. Students observing an Honor Code violation should report them to the instructor immediately.

5. 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.

6. During the class, students should follow habits most promoting learning and least disturbing to fellow students. These include not reading material irrelevant to the class, conversations unrelated to what is being discussed, late arrivals and abrupt walking out of the classroom and engaging in activities that could disrupt the classroom atmosphere including the improper use of electronic devices.

7. Resources are available on-campus for students having personal problems or lacking clear career and academic goals which interfere with their academic performance. These resources include: University Counseling Center (392-1575), Personal counseling at Student Mental Health (392-1171), Sexual Assault Counseling (392-1161) and Career Resource Center (392-1601).

8. Students who need special accommodations due to a disability are requested to communicate their needs to the instructor so that necessary arrangements could be made.

Schedule:

Aug 25, 2015 Tue  What’s this course? Introduction, Syllabus, Activity Reports

Aug 27, Thu  Why study herbs and vegetables? (Aug 28 – Last day for drop/add)

Sep 1, Tue  Your food: The global supply of fresh food, organic vs conventional, the divide between the rich and the poor, sustainability and the local food movement.

Sep 3, Thu  How did plants shape World’s history? Election of volunteers for the recipe book editor(s).

Sep 8, Tue  A historical account of human use of plants

Sep 10, Thu  Eating right and More: What do we learn from World’s longest living people?
Sep 15, Tue  Vegetables and herbs in human nutrition: Sources of minerals, vitamins & antioxidants.

Sep 17, Thu  Exercise - Setting up of container gardens. *Election of volunteers for watering the containers.* *Get seeds for exercise I.* *The class will meet at the greenhouse for this.* *Directions will be e mailed.*

Sep 22, Tue  Research on health promoting properties of vegetables and fruits: How to analyze research data?

Sep 24, Thu  Research on health promoting properties of vegetables and herbs II

Sep 29, Tue  Culinary Herbs: Lamiaceae – glandular hairs and flavor

Oct 1, Thu  Cool season Vegetables: Cauliflower, Cabbage, Collard – Flower development
Exercise - *Rooting of cuttings of Lamiaceae herbs.*

Oct 6, Tue  Lettuce, Endive and Artichoke.

Oct 8, Thu  Lettuce, Endive and Artichoke *Test 1.*

Oct 13, Tue  Carrots and Umbelliferous Herbs

Oct 15, Thu  Carrots and Umbelliferous Herbs: Spices and Condiments
Exercise – *Flavors and the use of spices and condiments.*

Oct 20, Tue  Peppers: “Building Better Peppers Project” and how do we breed new varieties?

*Students should have signed up for their topics for presentation and writing by Oct 22, 2015.*

Oct 22, Thu  Exercise – *Tour of the greenhouse and vegetable gardens.*

Oct 27, Tue  Banana and plantains. How do you get bananas in North America every day of the year?

Oct 29, Thu  Cassava: An important source of energy for Africa, but not without problems!

Nov 3, Tue  Vegetable Legumes I

Nov 5, Thu  Vegetable Legumes II

Nov 11, Wed  *Veteran’s Day*  No class

Nov 10, Tue  Cucumbers

Nov 12, Thu  Pumpkins and Squashes  *Test 2.*

Nov 17, Tue  Tomato, Potato and Eggplant. Exercise: *Drawing a Spring Veg garden for North Central Florida.*
Nov 19, Thu  Special presentation by a guest.

Nov 24, Tue  *Thanksgiving*. No class
Nov 26, Thu  *Thanksgiving*. No class

Dec 1, Tue  Student presentations

Dec 3, Thu  Student presentations

Dec 8, Tue  Student presentations - Last day of class

**Planned Activities.** These will be announced in class with specific instructions. Some of the activities will be done in class, and others need to be carried out outside the classroom. Activity 1 has no report and for the other activities (2 to 8), you need to write a formal report.

Activity 1.  Resources on vegetables, herbs and plants.
Activity 2.  Production of alfalfa, bean and radish sprouts.
Activity 3.  Propagation of herbs by cuttings
Activity 4.  Adding flavors to food: Herbs, Spices and Condiments
Activity 5.  Container gardening
Activity 6.  Production of vegetable transplants.
Activity 7.  Drawing up a Spring vegetable garden for North Central Florida.

**Formal report.** Use the following format for your formal reports. Include a title for the exercise and your name at the top of the page. Then, state the following in that order: objective(s) of the exercise, exactly what you did in this activity, what you observed and any concluding ideas, thoughts and inspirations.

The due dates for reports and the test dates will be announced in class.

**Oral presentations.** You can give a presentation using any format such as show-and-tell, blackboard talk, Power Point presentation, showing a video you made or clips that you found on-line etc. The key is to have one central point and a story line that makes it compelling to listen to. The topic of your presentation could be anything that relates to plants and their uses. Some examples for presentation topics are listed below but they are not exhaustive. Be creative and choose something that you will enjoy presenting. Sample topics: Unusual herb plants, vegetables or spices, biohistory of a species, trade relating to plants and plant products, new uses for old plants, genetic improvement of crops, cooking and ideas relating to the use of plants, do-it-yourself projects, nutritional value of plants, chemistry of flavors and fragrances, critical analysis of research on vegetables and herbs, prices of vegetable and fruits, availability and marketing, local food movement, sustainable food production, plants in arts, music and popular culture, horticultural industry, writers and thought leaders on food and crop production, special technologies for crop production, post-harvest preservation, packaging of vegetables and fruits, organic food, transgenic crops etc. The presentations will be graded for (a) content, (b) acknowledgement of information sources, if pertinent or originality, (c) clarity of communication including readability of slides and being loud enough to be heard at the last row, (d) good use of visual or audio or other aids and (e) generation of interest or audience-centered presentation.