

UNIVERSITY OF FLORIDA
Horticultural Sciences Department
VEC 2100 Fall 2016
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 237, Chemical Eng. Building, Center Drive [<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:

Vegetable Crops by DeCoteau DR, Prentice Hall, 2000. \$ 66.67, ISBN 10:0139569960.

Vegetable Gardening in Florida, By J.M. Stephens, Univ Press of Florida, ISBN 0813016746.

World Vegetables: Principles, production and nutritive values. By Vincent E. Rubatzky and Mas Yamaguchi, Chapman & Hall, ISBN 0-412-11221-3, \$89, pp.843 Second Ed., 1997

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

Other References:

Vegetables from Amaranth to Zucchini. By Elizabeth Schneider, William Morrow, ISBN 0-688-15260-0, \$65, pp. 775, 2001. (Reference book of recipes and photographs).

Perennial Vegetables by Eric Toensmeier, Chelsea Green Publishing, Vermont, ISBN 978-1-931498-40-1, 2007.

Encyclopedia of herbs and their uses. By D. Bown, Dorling Kindersley, ISBN 0-7894-0184-3, \$39.95, pp.424, First ed., 1995.

Manual of Minor Vegetables, By J.M. Stephens, Florida Cooperative Extension Service, IFAS, University of Florida, Gainesville, 1988.

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, nutritional and other dietary 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. 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:

Class attendance & participation (25 lectures)	100 points (20 %)
Essay (1 total)	100 points (20 %)
Activity reports (6 total)	100 points (20 %)
Class presentation (1 total)	100 points (20 %)
Tests (2 total)	100 points (20 %)
TOTAL	500 points

* 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; 392-1261), GatorWell (273-4450), Disability resource center (392-8565) 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:

<u>Aug 23, 2016 Tue</u>	What's this course? Introduction, Syllabus, Activity Reports
<u>Aug 25, Thu</u>	Why study herbs and vegetables? (Aug 26 – Last day for drop/add)
<u>Aug 30, Tue</u>	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.
<u>Sep 1, Thu</u>	How did plants shape World's history? <i>Election of volunteers for the recipe book editor(s).</i>
<u>Sep 6, Tue</u>	A historical account of human use of plants
<u>Sep 8, Thu</u>	Eating right and More: What do we learn from World's longest living people?
<u>Sep 13, Tue</u>	Vegetables and herbs in human nutrition: Sources of minerals, vitamins & antioxidants.

<u>Sep 15, Thu</u>	Exercise - Setting up of container gardens. <i>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.</i>
<u>Sep 20, Tue</u>	Research on health promoting properties of vegetables and fruits: How to analyze research data?
<u>Sep 22, Thu</u>	Research on health promoting properties of vegetables and herbs II
<u>Sep 27, Tue</u>	Culinary Herbs: Lamiaceae – glandular hairs and flavor
<u>Sep 29, Thu</u>	Cool season Vegetables: Cauliflower, Cabbage, Collard – Flower development Exercise - <i>Rooting of cuttings of Lamiaceae herbs.</i>
<u>Oct 4, Tue</u>	Lettuce, Endive and Artichoke.
<u>Oct 6, Thu</u>	Lettuce, Endive and Artichoke <i>Test 1.</i>
<u>Oct 11, Tue</u>	Carrots and Umbelliferous Herbs
<u>Oct 13, Thu</u>	Carrots and Umbelliferous Herbs: Spices and Condiments Exercise – <i>Flavors and the use of spices and condiments.</i>
Oct 14-15	Homecoming
<u>Oct 18, Tue</u>	Peppers: “Building Better Peppers Project” and how do we breed new varieties? <i>Students should have signed up for their topics for presentation and writing by Oct 25, 2016.</i>
<u>Oct 20, Thu</u>	Exercise – <i>Tour of the greenhouse and vegetable gardens.</i>
<u>Oct 25, Tue</u>	Banana and plantains. How do you get bananas in North America every day of the year?
<u>Oct 27, Thu</u>	Cassava: An important source of energy for Africa, but not without problems!
<u>Nov 1, Tue</u>	Vegetable Legumes I
<u>Nov 3, Thu</u>	Vegetable Legumes II
<u>Nov 8, Tue</u>	Cucumbers
<u>Nov 10, Thu</u>	Pumpkins and Squashes <i>Test 2.</i>
<u>Nov 11, Fri</u>	<i>Veterans day</i>
<u>Nov 15, Tue</u>	Tomato, Potato and Eggplant. Exercise: <i>Drawing a Spring Veg garden for North Central Florida.</i>

<u>Nov 17, Thu</u>	Special presentation by a guest.
<u>Nov 22, Tue & Nov 24, Thu</u>	<i>Thanksgiving.</i> No class
<u>Nov 29, Tue</u>	Student presentations
<u>Dec 1, Thu</u>	Student presentations
<u>Dec 6, Tue</u>	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 7), you need to write a formal report. For activity 8, you are expected to contribute 1 page of the book.

- 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.
- Activity 8. Class recipe book.

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.