Instructor: Bala Rathinasabapathi, Ph.D.
Room 2247 Fifield Hall
Phone 352-392-1928 x 323
Section 5175
Lecture: Mon, Tue, Wed, Thu & Fri; 2nd period (9:30 – 10:45 AM);
Room 303, Mechanical and Aerospace Engineering building
Lab: Take-home Projects, Hands on Activities and Writing.
Office hours: By Appointment; e-mail brath@mail.ifas.ufl.edu
Course Homepage: http://www.hos.ufl.edu/sabaweb

Optional Textbook:


VEC2100 Course Packet – Notes & additional reading will be distributed in class.

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

Objective:
To introduce students to a variety of culinary herbs and vegetables from around the world. Emphasis will be placed on diversity as it relates to uses, cultivation, genetics and properties of vegetables and culinary herbs.

General Syllabus:
1. Role of Herbs and Vegetables in our Food
2. Classification of Herbs and Vegetables
3. Physiological basis for phytochemical diversity - carbohydrates, amino acids and proteins, lipids, vitamins, pigments and antioxidants, plant defense compounds - metabolic pathways and precursors from which they are derived.
4. Vegetables in human nutrition - food phytochemicals & their growing importance.
5. Vegetables in the Politics of Food.

6. Toxic substances in vegetables - cyanogenic glycosides, alkaloids, tannins, enzyme inhibitors, calcium oxalate - Examples for each.


8. Descriptive botanical knowledge on groups of major and minor vegetables: Solanaceae, Poaceae, Cruciferae, Euphorbiaceae, Dioscoreaceae, Araceae, Musaceae, Alliaceae, Asteraceae, Brassicaceae, Chenopodiaceae, Leguminosae, and Cucurbitaceae.

9. Specific discussions on current topics - Role of single gene mutations in breeding sweet corn cultivars, Role of polyploidy in the evolution of Brassicaceae vegetables, Use of transgenic technology in improving tomato and cucurbits, Organic vegetables and herbs, Role of biodiversity in vegetable improvement, breeding for food phytochemicals.

10. The debate over Genetically Modified Food.

11. Vegetable and Herb Gardening: Opportunities will be given for students to do container gardening of herbs.

12. Students will be provided with “activity packs” and asked to do the project at home and write reports about the activity.

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

Assignments:
Students will be assigned several activity-oriented projects. The students need to turn in an activity report on each of them. There will be one writing and class presentation assignment for each student. 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 (25 lectures) 200 points (40 %)
Writing & Presentation (1 total) 100 points (20 %)
Activity reports (10 total) 100 points (20 %)
Quizzes/Tests (5 total) 100 points (20 %)

TOTAL 500 points

Grades for the course will be assigned according to established university policy.
90-100 = A 85-89 = B+ 80-84 = B 75-79 = C+ 70-74 = C 65-69 = D+

Course policies and procedures
1. Homework: Reports are due on the dates indicated. 10% deducted for incomplete homework or not on time by one week. No credit will be given for activities after one week.

2. Late homework policy: Late homework may be handed in at the discretion of the instructor at the lab (following the day when it is due) with a 20% penalty. No homework will be accepted after the final class meeting. If you are having trouble with homework, please see me immediately.

3. Test Makeups will be arranged in the case of an emergency and must be scheduled within a week of the original test and at the convenience of the instructor.

4. 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.

5. 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.

6. 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.

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).

Schedule:
July 3, 2006 Mon  What’s this Course? Introduction, Syllabus, Activity Reports

July 4, Tue  Independence Day, No class

July 5, Wed  Naming & Classification of Vegetables & Herbs
VEC2100 Activity 1. Resources on Vegetables & Vegetable Gardening.

July 6, Thu  Species and Cultivars: How do they breed new varieties?
VEC2100 Activity 2. Preparation of Herb Bookmarks I.

July 7, Fri  Nutritional Benefits of Vegetables and Herbs
VEC2100 Activity 3. Germination of herb and vegetable seeds.

July 10, Mon  Toxic Principles in Vegetables and Herbs

July 11, Tue  Anticancer Properties of Vegetables and Herbs

July 12, Wed  Culinary Herbs: Lamiaceae
VEC2100 Activity 4. Propagation of herbs by cuttings.

July 13, Thu  Culinary Herbs: Lamiaceae
VEC2100 Activity 5. Container Gardening of Herbs.

July 14, Fri  Cool season Vegetables: Cauliflower, Cabbage, Collard

July 17, Mon  Lettuce, Endive and Artichoke
VEC2100 Activity 6. Production of alfalfa and other sprouts

July 18, Tue  Carrots and Umbelliferous Herbs
VEC2100 Activity 7. Identification of culinary herbs, spices and condiments.

July 19, Wed  Vegetable Legumes I

July 20, Thu  Vegetable Legumes II
VEC2100 Activity 8. Mushroom cultivation

July 21, Fri  Potato
July 24, Mon    Fall Garden Plan for North Central Florida
July 25, Tue    Tomato, Peppers and Eggplant
July 26, Wed    Cucumbers

VEC2100 Activity 9. Production of vegetable transplants for the Fall garden

July 27, Thu    Pumpkins and Squashes
July 28, Fri    Cassava
July 31, Mon    Banana and plantains

Aug 1, Tue      Alliums: Onion, Garlic and Shallots
Aug 2, Wed      Sweet potato
Aug 3, Thu      Yams, Okra and Roselle
Aug 4, Fri      Spinach, Beet and Other Chenopods

No reports will be accepted after this date.

Aug 7, Mon      Student presentations
Aug 8, Tue      Student presentations
Aug 9, Wed      Student presentations
Aug 10, Thu     Student presentations /Course evaluation
Aug 11, Fri     Student presentations