Tropical Gardens-Theory and Practice Pt 1: Creating a Latin American Garden

LAS 6292/3930 ANT 4930
M PERIOD 8
T PERODS 9-9

Instructor: Dr. Richard Stepp
Office Hours: Grinter 337 by appointment
Office phone: 392-0299

Overview:
This course examines tropical gardens as an important component in integrated conservation and development. The role of homegardens for community subsistence, crop genetic diversity, traditional ecological knowledge maintenance and production and aesthetic and spiritual value is explored. The course fully integrates the social and biophysical sciences and draws from literature in anthropology, agroecology, crop and soil science, development studies, economics, horticulture, systems ecology, ethnobiology, ethnoecology, geography, history and rural sociology, among others.

In order to bridge theory and practice and develop teamwork skills, the course will include the creation, conceptualization and development (including interpretive and pedagogical materials) of a teaching garden on a dedicated large and highly visible space on campus near the bat houses. The course this year will focus on tropical Latin America. The garden will provide research opportunities beyond the classroom as part of a Latin American ethnobotanical sister garden network with sites throughout the world.

Learning Objectives and Goals:
* To develop a holistic and systems-based understanding on how humans interact with the biophysical environment
*Reflect on personal and intellectual connections to homegardens
* To understand the inter-relationship between the biophysical environment and human cultures in Latin America
* To recognize the importance of tropical gardens for human subsistence and survival
* To merge theory, skills and praxis through the creation of a tropical garden
*Gain experience in developing goals, communicating ideas, and project planning. Understand the skills needed to develop a teaching garden, and get practice with these skill

Readings
Readings are assigned on a weekly basis and will be made available in advance.

Course Requirements and Grading

A significant portion of your grade will be based on participation and attendance. You will receive 1 point for each week in attendance. The remaining points will be given for actively participating beyond merely being present. You will be required to present an overview of your final paper project (described below). Presentations are concise, in-class summations of your individual paper. Your presentation will comprise ten percent of your overall semester grade. There will also be a fun and exciting assignment entitled 1491 Dinner that will be explained in class.

For **graduate students**, a comprehensive final paper is required, ranging from 10-12 pages in length, typed and double-spaced. The paper will involve an overview of the interpretive and pedagogical materials for your particular group section of the garden. It should be tied directly to educational outreach in the garden. We will discuss potential group topics early in the semester and you will need to turn in a one-page summary of your group no later than February 8th. The paper should be carefully proofed and spell checked before they are handed in. Assignments that do not meet basic standards for correct spelling and grammar will be returned ungraded. This paper counts toward 25% of your grade.

For **undergraduate students**, an overview of a particular species that will be highlighted in the garden is required, ranging from 5-6 pages in length, typed and double-spaced. We will develop a list of potential plant candidates early in the semester and you will need to decide on a species no later than February 15th. Each student must select a different species and the species must be approved by the instructor. The paper should be carefully proofed and spell checked before they are handed in. Assignments that do not meet basic standards for correct spelling and grammar will be returned ungraded. This paper counts toward 25% of your grade.

Grading Scale	
A = 93 or above	C = 73 - 76
A- = 90 - 92	C- = 70 - 72
B+ = 87 - 89	D+ = 67 - 69
B = 83 - 86	D = 63 - 66
B- =80 - 82	D- = 60 - 62
C+ = 77 - 79	E = 59 or below

<u>Group projects</u>
Students will work in groups to design, create and implement a specific section of the garden. Each group will have at least one graduate student assigned who will be responsible for the interpretive materials, in addition to overall work with the group. Students must turn in a written plan that includes their goals, project description, timeline, and evaluation plan. Groups must present their project idea and plan to the class. Project Plan and Group Update (10pts): Written explanation of goals and project plan with timeline; includes description of individual roles and responsibilities for project. Final Presentation (15pts): Final project and class presentation.

Your semester grade will be based on the following percentages:

Individual Paper:	25%
1491 Dinner:	10%
Participation:	30%
Paper Presentation:	10%
Group Project:	25%

**********Overview of the Course **********

Week 1: 1/11
- Overview of the course
- Introduction to homegardens

Week 2: 1/18
- MLK Day
- Developing group project ideas

Week 3: 1/25
- Biocultural diversity: why it matters
- The science of survival!

Week 4: 2/1
- Ethnobiological classification
- Interpretation in gardens

Week 5: 2/8 (Paper/Group topics due in class on Monday)
- Domestication and the great Columbian biological exchange
- Highland Maya case study

Week 6: 2/15
- Gender and homegardens

Week 7 2/22 (1491 Assignment due in class on Monday)
- Learning traditional ecological knowledge

Week 8: 2/29 Spring Break

Week 9: 3/7 (Project plan and group update due in class on Monday)
- Homegardens and agroecosystems
- Field trip: Kanapaha Botanical Garden (3/8)

Week 10: 3/14
- Agrobiodiversity

Week 11: 3/21
- Medicinal plants
- Foods as medicines, medicines as foods

Week 12: 3/28
- Climate change and homegardens

Week 13: 4/4 (Undergraduate final paper due on Monday)
- Undergraduate student presentations

Week 14: 4/11 ((Graduate final paper due on Monday)
- Graduate student presentations

Week 15: 4/18 (Final Project Due Wednesday April 26th by 5 pm)
- Group presentations, class potluck, reflections, next steps!

Readings

Caballero, Javier. 1992. Maya homegardens: past, present and future, *Etnoecológica* 1(1): 35–54.

Clawson, David L. 1985. Harvest Security and Intraspecific Diversity in Traditional Tropical Agriculture. *Economic Botany* 39(1): 56–67.

Das, T., Das, A.K. (2005). Inventorying plant biodiversity in homegardens: A case study in Barak Valley, Assam, North East India. Assam University. Current Science 89/1, 155- 163.

Del Angel-Perez, A.L., and M.A. Mendoza, 2004. Totonac Homegardens and Natural Resources in Veracruz, Mexico. Agriculture and Human Values 21: 329-346

Eyzaguirre, P.B.; Linares, O.F. (eds.) (2004). Home Gardens and Agrobiodiversity. Smithsonian Books, Washington, USA.

Fernandes, E.C.M., and P.K.R. Nair. 1986. An Evaluation of the Structure and Function of Tropical Homegardens. Agric. Syst. 21: 279-310

Ford Anabel & Ronald Nigh. 2009. Origins of the Maya forest garden: Maya resource management. *Journal of Ethnobiology* 29(2): 213–36.

Kumar, B .M.; Nair, P.K.R. (2004). The enigma of tropical homegardens. Agroforestry Systems 61, 135-152.

Kumar B.M., and P.K.R. Nair. 2006. Tropical Homegardens: A Time-Tested Example of Sustainable Agroforestry. Springer, Dordrecht, The Netherlands.

Montagnini, F. 2006. Homegardens of Mesoamerica: Biodiversity, Food Security, and Nutrient Management. In: B. M. Kumar & P. K. R. Nair (eds.), *Tropical Homegardens: A Time-Tested example of Sustainable Agroforestry*. Dordrecht: Springer Link, pp. 299–316.

Pulido, M. et al. (2008). Homegardens as an alternative for sustainability: challenges and perspectives from Latin America. Ch 4. in Current Topics in Ethnobotany (eds. U. Albuquerque & M. Ramos).

Soemarwoto, O. & Conway, G.R. (1992). The Javanese homegarden. Journal for Farming Systems Research-Extension 2, 95-118.

Toledo, Victor. M., Benjamín Ortiz-Espejel, Leni Cortés, Patricia Moguel & Maria de Jesus Ordoñez. 2003. The multiple use of tropical forests by indigenous peoples in Mexico: a case of adaptive management. *Conservation Ecology* 7(3): 9.

Toledo, Víctor Manuel, Ana I. Batis, Rosalba Becerra, Esteban Martínez & Clara H. Ramos. 1992. Products from the Tropical Rain Forests of Mexico: An Ethnoecological approach. In: Mark J. Plotkin & Lisa Famolare (eds.), *Sustainable harvest and Marketing of rain forest products*. Island Press, Washington, D.C., pp. 100–9.

Stepp, J.R. 2014. Pedagogy and Botany of the Columbian Biological Exchange: the 1491 Meal. pp 154- 160. In: *Innovative Strategies for Teaching in the Plant Sciences*. C.L. Quave, Ed. Springer Press, New York.

Torquebiau, E. (1992). Are tropical agroforestry home gardens sustainable? Agriculture, Ecosystems and Environment 41, 189-207.

Whitmore, Thomas M. & B. L. Turner II. 2000. Landscapes of cultivation in Mesoamericaon the Eve of the conquest. In: Michael E. Smith & Marilyn A. Masson (eds.), *The Ancient Civilizations of Mesoamerica*. London: Blackwell Publishers, pp. 402–25.

Yamada M., and Osaqui H.M.L. 2006. The role of homegardens in agroforestry development: Lessons from Tomé-Açu, a Japanese–Brazilian settlement in the Amazon. In: B. M. Kumar & P. K. R. Nair (eds.), *Tropical Homegardens: A Time-Tested example of Sustainable Agroforestry*. Dordrecht: Springer Link, pp. 299–316.

Zarger, R.K. and J.R. Stepp 2004. Persistence of Botanical Knowledge Among Tzeltal Maya Children. *Current Anthropology*. 45:413-418.

E-mail policy

If your query can wait until the next class time then please do so. I would much rather communicate in person than by computer. I receive an enormous number of emails each day and there are only so many hours in the day (stepp@ufl.edu).

Classroom behavior policy

Absolutely NO cell phone use and NO texting is permitted in the classroom and garden at any time. Students using a cell phone during class-time will receive a warning. If the problem occurs again during the semester, the student will be asked to leave the class and will receive a 0% participation grade. No video/audio recording or photography of lectures is allowed. However, there may be times when you may need to photograph the garden site for your group project. Disruptive behavior in general is not allowed. Failure to follow these policies will negatively impact your participation grade and may result in your dismissal from the course.

Attendance and make up policy

Attendance at all times is required. No late assignments will be accepted except in extreme cases of documented illness or emergency.

University of Florida Policies

Honesty:

As a result of completing the registration form at the University of Florida, 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."

UF Counseling Services:

Resources are available on-campus for students having personal problems or lacking a clear career and academic goals which interfere with their academic performance. These resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling;
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling;
3. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual counseling; and
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

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.

Disabilities Accommodations:

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.

UF Grading Policy:

http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html .