

AG 175/175L: Agroforestry & Lab Fall 2011



9:30am – 3:30pm Mondays Bldg 3393, Room 104 (Manono Campus)

Instructor: Dr. Pamela Scheffler

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Office Hours: W 2:15-3:15, F 11:15-12:15, or by appointment
Bldg 3393, Room 124

Texts: Agroforestry Guides for Pacific Islands. 2000. C. R. Elevitch and K. M. Wilkinson
(available for free download at: <http://www.agroforestry.net/afg/book.html>)
Growing Hawai'i's Native Plants. 2005. K. E. Lilleeng-Rosenberger

*Thousands of tired, nerve-shaken, over-civilized people are
beginning to find out that going to the mountain is going home;
that wildness is necessity; that mountain parks and reservations
are useful not only as fountains of timber and irrigating rivers,
but as fountains of life --John Muir.*

Course Description: Methods (including field methods) of designing mixed forestry and agricultural systems combining long term tree crops with understory plants. Topics include choosing combinations of trees and understory plants for growth characteristics, climate zone, substrate, slope and economic goals; planting methods using plants to build a healthy soil ecosystem; methods of reducing soil erosion; incorporating native and medicinal plants; and use of shade and mulch to reduce weed problems. **Student Learning Outcomes (SLOs):** by the end of the semester students will be able to define agroforestry, describe various types of agroforestry systems, select species for inclusion in an agroforestry system based on site characteristics and economic goals, utilize specific species to improve soil quality, and reduce chemical inputs to systems through the use of alternative techniques.

Note: The lecture and laboratory sections must be taken concurrently.

Grade will be based on the following:

Quizzes/assignments:	10 pts
Participation/attendance	20 pts
Design Project	20 pts
Trip Reports	20 pts
Papers (3)	30 pts
<hr/> Total	<hr/> 100 pts

Learning environment: I expect each of you to contribute positively to the learning experience, both your own and that of your classmates. As such, I will expect you to have completed all reading assignments by the day indicated on this syllabus and be prepared to ask questions and/or discuss the material in class. I expect honesty and integrity in all your work and interactions with other students*. We will spend a considerable amount of time visiting properties. I expect each of you to be respectful and polite at all times – failure to do so will result in your dismissal from the class. In keeping with the learning environment that we are creating, all cell phones *must* be turned off before entering the classroom and must remain off for the duration of the class. If you need any special assistance, please ask**.

Materials needed: Please come to each class with material for writing (i.e., pen(cil) and paper) and appropriate clothing. On field trips you need to be prepared to be outside, regardless of the weather: please bring comfortable and sturdy shoes, a water bottle, and **be prepared for rain and sun**. Bring enough food to last you through the day (lunch plus snacks).

Email: You must check your hawaii.edu email account regularly while taking this course since **email will be used for critical communication** during the semester.

Paper Assignments:

There are 3 (3-5 page) research papers due during the semester in weeks 4, 8, and 13. Each paper will be researched using reference books and scientific journals. You must have at least 3 citations for each paper from non-internet sources. Papers may be re-written for an improved grade but all re-writes are due one week after you have received the paper.

Trip Reports:

Trip reports are a narrative summary of what you did and learned on the field portion of the course. The trip reports should be separate from the notes you keep in class. Your trip report will describe where we went, what we did/observed, and what you learned from it. Each report should be approximately 2-3 pages long.

Design Project:

This is a group project. After being assigned an area in which to work you will work together to come up with a feasible plan to create an agroforestry system on the site using several tree and non-tree species (including animals). Your project must contain a map of the property which indicates where the different species will be located. Because agroforestry systems are dynamic, you will need to have several copies of your site map detailing the layout over time. Your plan should include a rough estimate of the costs (labor, capital input) over time and the returns (e.g., product). You will turn in and present this project on December 5 (last day of class). **Late projects will not be accepted.** Each student's grade will be modified based on group evaluation of their contribution to the overall project.

Passing Grades:

90-100%	A	70-79%	C
80-89%	B	60-69%	D

Counselors are available: please call 974-7741 if you would like to speak with a counselor about any issues which have a negative impact on you ability to successfully complete this, or any other, class.

***Compliance with Hawaii CC Student Conduct Code:**

Every student is expected to comply with the student conduct code: "Impermissible behavior includes... interference in the rights of others, interference with university processes, theft of mutilation of college property, disruption, abuse of controlled substances, off-campus behavior, academic dishonesty which includes cheating and plagiarism."

****Individual Accomodation**

Haw.C.C. is committed to provide equal access to the campus, classes, and programs for students who have disabilities. If you have a documented disability and/or related access needs, please see your instructor during office hours or contact Karen Kane of the Ha`awi Kokua Program (933-0702) as early as possible. If you are a student who needs to have an accommodation, please discuss your needs and make your request in a timely manner.

Tentative Field, Class and Reading Schedule AG 175/175L

Date	Class	Reading	Lab/Field Trip	
August 22	Introduction & film		Library	
August 29	World Issues and Agroforestry	Pages 1-22	Observation Exercise	
September 5	Labor Day Holiday!!			
September 12	Introduction to Design Project		Introduction to Design Project	
September 19	Species selection -Trees	Pages 23-69	Fruit & Ti	Report Due: Tree crop
September 26	Species selection - Non timber	Pages 71-98	greenhouse	
October 3	Understory crops	Pages 100-120	project	
October 10	Animals in Agroforestry systems	Pages 149-160	Silvopastoralism	
October 17	Complementary species selection	Pages 123-148	mapping	Report Due: Intermediate crop
October 24	Native Species & Habitat Protection	handout	Mountain View Antherium farm	
October 31	windbreaks	Pages 203-232	Waimea windbreaks	
November 7	Soils & Soil Conservation	handout	Film	
November 14	Integrating agriculture and forestry	Pages 99-111	John Mood	Report Due: Understory crop
November 21	Crop improvement		grafting and/or air layering	
November 28	TBA		Project wrap-up	
December 5	Project Presentations			