

AGROFORESTRY:
FNR 5335 (Section 7638)/ FOR 4854 (Section 6303); 3 Credits
SPRING SEMESTER 2012

Instructor: P.K. Nair (Ph.D., Dr.Sc., and four honorary Doctor of Science degrees)
330 N-Z, 846-0880; pknair@ufl.edu; <http://www.sfrc.ufl.edu/faculty/nair>

Time and Place of Lectures:

Mon, Wed, Fri; Period 2 (8:30 AM - 9:20 AM); 222 N-Z Hall

Purpose of Course:

To familiarize the students with:

1. The concepts and principles of agroforestry (AF)
2. The complexity and diversity of AF
3. Improved AF technologies: tropical and temperate zones
4. Recent research and development initiatives
5. Problems and methodologies of AF research
6. Potentials of AF in land management and international development

Course Policy:

The course will consist primarily of lectures, classroom discussions, and library research. Prerequisite is an understanding of the principles of sound land management; students are expected to be familiar with the biological fundamentals of agricultural and forestry production systems. Emphasis will be on the use of agroforestry as an option for addressing the land-use problems such as resource limitations, fragile soils, and multiple-component systems in the developing world, and environmental issues and societal concerns about land use in the industrialized world.

Each student is required to prepare a major term paper and make an oral or poster presentation based on that to the class (see the attached guidelines).

Text Book:

No prescribed text books; but the following books will be used extensively:

Nair, P.K.R. 1993. *An Introduction to Agroforestry*. Kluwer (now Springer), Dordrecht, The Netherlands. Paperback, ISBN 0-7923-2135-9; and Nair, P.K.R et al. (eds). 2004. *New Vistas in Agroforestry*, Kluwer. Two copies each of these books will be kept on reserve in Science Library.

Reference Books (Copies of these will be kept ON RESERVE in the Science Library.)

Seven books in the Advances in Agroforestry Series since 2004

Garrett, H.E. ed.: *Temperate Agroforestry*, 2nd ed., ASA, Madison, WI, 2009

Buck, Lassoie, Fernandes: *Agroforestry in Sustainable Agri. Systems*, CRC Press, 1999

Nair and Latt: *Directions in Tropical Agroforestry Research*, Kluwer, 1998

Young: *Agroforestry for Soil Management*, 2nd ed., CABI Int'l, 1997

Nair: *Agroforestry Systems in the Tropics*, Kluwer, Netherlands; 1989

Reference Journal:

Agroforestry Systems (Kluwer/Springer) (Since 1982)

Course Outline

The history, definition, concepts, and principles of AF

Examples of existing AF systems

Classification of AF systems

Improved AF technologies in the tropics

Improved fallow; homegardens; alley cropping; mulching/green manuring; fodder banks

North American and other Temperate-zone AF

Plant aspects of AF

AF species; multipurpose trees, fodder- and firewood trees; N₂-fixing trees; herbaceous species; plant management in AF

Soil/Environmental aspects of AF

Nutrient cycling; biomass decomposition; soil productivity management; soil conservation; environmental amelioration

Economic aspects

Economic and financial analysis, valuation of products and benefits

Social aspects

Sociocultural linkages, land tenure, gender, institutional aspects of AF

Design and evaluation of agroforestry systems

Research methodologies and criteria; the Diagnosis and Design approach; analysis and interpretation of data in AF; evaluation of AF systems

Some guest lectures are planned.

Grading

1. One 50 min exam (mid-term)	20 %
2. Major Term Paper (due on 26 March)	30 (Details attached)
3. Other assignments, etc.	20
4. Final (2 h) examination	30
Total	100 %

Grades: A: 90 and above; B+: 85-89; B: 80-84; C+: 75-79; C: <75.

Academic Honesty

In the Fall of 1995, the University of Florida student body voted to enact a student honor code and approved the following statement:

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

This code will be adhered to in this course (See details at the end of this document).

**AGROFORESTRY, FNR 5335/FOR 4854
SPRING SEMESTER 2012**

TERM PAPER

Every student must hand in a term paper on or before 26 March, and later present it to the class as an oral (15-min) or poster presentation. Preparation of a poster is encouraged.

The topic of the paper, which must be finalized in consultation with the instructor before the end of February, can be a specific agroforestry practice/component, a potential agroforestry intervention for a defined ecological area, or a sociological aspect of agroforestry. Some indicative examples are:

- nutrient cycling in AF systems
- tree domestication/improvement for tropical AF systems
- the role of AF in species conservation
- environmental amelioration through agroforestry
- AF applications in southeastern United States
- marketing of specialty tree products
- AF systems and carbon sequestration, climate change mitigation & adaptation

The paper will be based on review of existing information (library search), followed by discussion and conclusions.

The text of the paper should be typed (double-spaced); the suggested length is 20 pages. It will be graded according to the following criteria:

1. Timely submission of the paper (5%)
2. Organization, objectives and originality (20%)
3. Depth of information gathered (25%)
4. Discussion and conclusions (25%)
5. Presentation (25%)

Since the paper will be based on library research, please observe accepted norms of scientific ethics. Literature citation should accompany the text. Ideally, a maximum of 25 most relevant and recent references may be cited.

Presentations

The presentation will highlight salient features of the paper in about 15 minutes during April. The schedule will be decided in discussion with the class.

FNR 5335: AGROFORESTRY, SPRING 2012

TENTATIVE COURSE SCHEDULE

Date	# lectures	Topic
Jan	3	Introduction: AF History, Concepts, Principles
	3	Tropical and Temperate AF Systems
	2	Improved AF Systems: Overview
Feb	2	Ecological Principles
	2	Agroforestry application in the southeastern U.S.
	2	Plant Aspects: Principles of Productivity
	3	Plant Aspects: Components - MPTs, Crops, Competition
Feb 24: FIRST EXAM		
Mar	3	Soil Aspects: Tropical Soils, their productivity & management
	3	Biomass decomposition, soil organic matter
	2	Soil conservation, environmental amelioration
	2	Carbon sequestration, Climate change mitigation & adaptation
	1	Component Interactions
Apr	2	Social and economic aspects
	1	Recent research and development initiatives in AF
	2	AF System/Technol. Design and Evaluation, Literature
	4	Students' Presentations/Discussion
	1	Wrap-up discussions

FINAL EXAM: Schedule to be decided in discussion with the class.

Holidays/no classes:

16 Jan (MLK Day)

Spring Break: 3 – 11 March

Classes end: 25 April

Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities

In 1995 the UF student body enacted an [honor code](#) and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: "**On my honor, I have neither given nor received unauthorized aid in doing this assignment.**"

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court. (*Source: 2010-2011 Undergraduate Catalog*)

It is assumed all work will be completed independently unless the assignment is defined as a [group project](#), in writing by the instructor. This policy will be vigorously upheld at all times in this course.

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.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.
0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/