

Tropical Cropping Systems
AGR 5277C / AGR 4932
Agronomy Department - University of Florida
Fall 2019

Instructor:	Greg MacDonald Office - 2059 McCarty Hall-D Email – pineacre@ufl.edu Office phone – 352-294-1594 Cell – 352-262-8393
Class Schedule:	Tuesday Period 7 (1:55 – 2:45pm), Thursday Periods 6-7 (12:50-2:45 pm)
Location:	McCarty A – room 3096
Course Website:	Canvas site; course material will be provided in class and via email
Course Description:	This <u>3 credit</u> course will provide students with a better appreciation of and competencies needed for a fundamental understanding of tropical cropping systems. Students will gain basic knowledge of the major tropical food crops (biology, production, and utilization), tropical environments and ecology, and tropical cropping systems. Cropping systems will be discussed within the context of agricultural development, focusing on current management practices, constraints to production, and food security. Historical and current models for rural agricultural development will also be discussed, including holistic approaches to crop production and the role of technology in tropical cropping systems.
Course Objective:	The objective of this course is to provide students with an understanding of tropical cropping systems using a multi-disciplinary approach covering a broad range of topics in the areas of agronomy, ecology, and the social sciences.
Office Hours:	By appointment – send email or see me after class to schedule a time.
Class Attendance:	Attendance is not mandatory for all lectures but students must be present for discussions of papers, presentations and guest lecturers as a portion of your grade will be based on participation. <i>“Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.”</i>

Textbooks: No textbook required but students will be provided with assigned readings from various sources including websites, journal articles, reports of development organizations such as the FAO, World Bank and USAID.

Assessments and Grading: Exams (2 @ 30% each); home work (8%); country paper (12%); class participation (10%). Exam dates indicated in the Course Topical Outline section of this syllabus. Exam questions will come from in class readings, lecture notes, and discussions.

Course Grading Scale: For University of Florida grading policy see:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

The following grading scale will be used in this class.

Point range (%)	Letter Grade	GPA Equivalent
93.0 – 100	A	4
90.0 – 92.9	A-	3.67
87.0 – 89.9	B+	3.33
83.0 – 86.9	B	3
80.0 – 82.9	B-	2.67
77.0 – 79.9	C+	2.33
73.0 – 76.9	C	2
70.0 – 72.9	C-	1.67
67.0 – 69.9	D+	1.33
63.0 – 66.9	D	1
60.0 – 62.9	D-	0.67
< 60	E	0

Course Evaluation: Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Student 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. 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 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Academic Honesty: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following 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." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Cell Phone, Laptop, etc. Policy:

Please restrict the use of these devices for classwork while in class unless taking notes. Taking pictures of slides is strictly forbidden and considered an infringement of copyright.

UF Counseling Services and Student Resources:

Students experiencing crises or personal problems that interfere with their general wellbeing 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*
 - *Counseling Services*
 - *Groups and Workshops*
 - *Outreach and Consultation*

- *Self-Help Library*
- *Wellness Coaching*
- *U Matter We Care*, www.umatter.ufl.edu/
- *Sexual Assault Recovery Services (SARS)*
- Student Health Care Center, 392-1161
- *University Police Department* - 392-1111 (or 9-1-1 for emergencies).
<http://www.police.ufl.edu/>

Academic Resources:

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <http://www.crc.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Student Complaints: <http://www.distance.ufl.edu/student-complaint-process>

Software Use:

All faculty, staff and students of the University of Florida 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.

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

General Outline and Class Schedule for Tropical Cropping Systems

<u>Lecture Topic</u>	<u>Date(s)</u>
Review course outline, syllabus, class format, assignments	August 20
Defining the Tropics, Farming Systems	August 22
Review of Crop Growth/Plant Basics	August 27
Field trip to Plant Science Research and Education Center	August 29
Climate, Water, Drought and Irrigation	September 3, 5
Genetic Resources – it's all in the seed	September 10
Introduction to Crop Production – getting dirty...	September 12
Introduction to Soils	September 17
Tropical Soils – guest lecture Dr. Pedro Sanchez	September 19
Types of Cropping Systems, Intercropping/Relay/Multi	September 24
Biotic Stressors	September 26
Test 1	October 1
Social Implications and Gender Equality in Rural Agricultural Development – Guest Lecture - Dr. Mickie Swisher	October 3
In-class project - to be determined.....	October 8
Guest Lecture – Cropping Systems Dr. Michael Mulvaney	October 10
A Day at the Farm.....	October 15

IFAS Global – The role of UF in Ag Development
Rose Koenig

October 17

Tropical Crops – Grasses

October 22, 24

Tropical Crops – Legumes and other Pulses

October 29, 31

Tropical Crops –Root/Tubers Perennial/Fruit/Oil/Trees

November 5, 7

Tropical Crops – Fiber, Specialty, etc.

November 12, 14

Test 2 – Take Home on Nov. 14, due 21

Post-Harvest Losses – Guest Lecture
Dr. Steve Sargent

November 19

Post-Harvest Contamination – Mycotoxins

November 21

Overview of Research and Outreach Systems
In Development

November 26

Final Paper Due* (no class – Dr. MacDonald out of town)

December 3

**see next page*

Presentation and Paper Assignment

Each of you will choose a region/village/ecological area that you will be asked to develop an agricultural improvement plan. The paper should be 10-20 pages and have multiple written and web sources. You are asked to include the following topics:

- a. Brief history of agriculture and agricultural development
- b. Current agricultural production practices
- c. Climate using current models of temperature, rainfall patterns, etc.
- d. Soils data – maps, etc.
- e. Demographics and social implications and constraints to agricultural production
- f. What crops can be grown – must include a systems approach with.....
 - i. Agronomic crop – low value
 - ii. Horticultural crop – high value
 - iii. Perennial tree crop
 - iv. Livestock and/pasture systems
- g. Irrigation, fertility and pest limitations
- h. Market potential, including value added markets
- i. What is your strategy for agricultural development?