

AGR 6325L Plant Breeding Techniques
Spring Semester 2021

Course Coordinator: Dr. Kevin Kenworthy

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Meeting time: Monday 6-7 (12:50-2:45), PSF 4 (Located near Fifield greenhouses)

Course Description: This course consists of a basic introduction to plant breeding methods and techniques used by crop and horticultural plant breeders in Florida. One introductory lecture will be given by Dr. Quesenberry on Monday January 11. The remainder of the course will be guest lectures by various plant breeders from throughout Florida presenting discussions of their breeding programs with emphasis on methods, selection objectives, pollination biology, and sources of funding. The course is intended to provide a broad overview of programs, and designed to illustrate applicable approaches to plant breeding. The final lecture will be an overview of Florida Foundation Seed by John Beuttenmuller.

Attendance Policy: Lectures serve as the primary source of information for this course, thus attendance is strongly encouraged.

Grading Policy: Students will be required to submit written reports of 5 of the 11 breeding program lectures presented in the class, excluding the introductory lecture by Dr. Kenworthy/Quesenberry and the lecture by John Beuttenmuller. These reports are expected to be typed, double spaced, a minimum of three pages, maximum of four. The reports should highlight the discussion of the topic presented in lecture and **should include supplemental library references** (see last page for an outline to serve as a guide for topics to cover in your report). It should contain a critique of the methods discussed by the lecturer. At least two of these reports must cover lectures presented by the mid-point of the term (March 8), and no report will be accepted later than two weeks after a subject has been presented. The average grade on these six reports will count 90% of the class grade. The instructor will assign a grade for class participation representing the remaining 10% of the grade. All students are expected to participate in the discussion at the end of each presentation.

Grades:

- A: $\geq 90\%$
- B+: $\geq 85 < 90\%$
- B: $\geq 80 < 85$
- C+: $\geq 75 < 80$
- C: $\geq 70 < 75$

Online Course Evaluation Process:

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>.

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>.

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.

Services for 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. 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/

Campus 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
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- *Career Resource Center, First Floor JWRU, 392-1601,* www.crc.ufl.edu/next-level
- Student Complaints:
 - Residential Course: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

Guest Presenters: A tentative list of guest presenters is attached, and a may be amended through the semester. Some of these presentations may be held at various locations around the Gainesville campus (where materials are growing in the field or greenhouse). It is your responsibility to confirm at the previous meeting where the location of the next meeting will be. All presentations will be available through Zoom and each presentation will be recorded.

PLANT BREEDING TECHNIQUES AGR 6325L

LECTURE SCHEDULE SPRING 2021

<u>Date</u>	<u>Lecturer and Topic</u>
January 11	Dr. Kevin Kenworthy absent Dr. Ken Quesenberry, Agronomy Dept. - Class introduction and Basic Plant Breeding Review.
18	Holiday
25	Dr. Esteban Rios, Agronomy Department, Forages
February 1	Dr. Ali Babar, Agronomy Department, Small Grains
8	Dr. Alan Chambers, Tropical REC, Homestead – Vanilla
15	Dr. Patricio Munoz, Horticulture Science Dept. - Blueberry
22	Dr. Hardev Sandhu, Everglades REC, Belle Glade - Sugarcane
March 1	Dr. Balasubramani Rathinasabapathi (Saba), Horticulture Science Dept. – Pepper
8	
15	Dr. Barry Tillman, North Florida REC, Marianna - Peanut
22	Dr. Manjul Dutt, Citrus REC, Lake Alfred - Citrus
29	Dr. Vance Whitaker, Gulf Coast REC, Wimauma – Strawberry
April 5	Dr. German Sandoya, Everglades REC, Belle Glade – Lettuce
12	Dr. Jose Chaparro, Horticulture Science Dept. - <i>Prunus</i> breeding
19	Mr. John Beuttenmuller, Florida Foundation Seed Producers

This is the outline provide to the presenters. You can use this as a guide for information to include in your reports. Your report does not have to follow this exactly. It is more important that your report have a nice flow of information.

- Introduction of the species
 - Growth habit
 - Biology
 - Annual/perennial
 - Ploidy level(s)
 - Flowering habit and type of flower
- Industry
 - Describe the industry in Florida and worldwide
 - Potential for development of the industry
 - How you work with industry
- Breeding program
 - Goals of the program
 - Breeding methods
 - Where you are in the program
 - If possible, demonstrate/illustrate the plant, flowers and crossing methods.