

PBGG/HORT/CRSS 4140/6140 - 2016

Plant Breeding

Instructor: Dr. Cecilia McGregor
1119 Plant Sciences Building
Office phone: 706-542-0782
Email: cmcgre1@uga.edu
Office Hours: Open door policy.

Lecture: Monday, Wednesday and Friday: 1:25 to 2:15 pm
1205 Miller Plant Sciences Building
Available in Tifton and Griffin through Zoom (contact Instructor for details)

Description

The course will cover fundamental principles and theories utilized in the science of plant breeding and cultivar development, and the role breeding plays in plant improvement.

Class format

This class will meet annually during the Fall semester. This is a 3-hour course. The class will meet three times a week for lectures and discussions. It will be managed through New eLC (<https://uga.view.usg.edu/>).

Attendance policy

Attendance is required. If a student has to miss class, make-up work will be assigned by the instructor. Note: In-class participation will make up 10% of your final grade. Quizzes, which may be unannounced, count an additional 5% of your grade. There will no make-up for quizzes missed without prior arrangement.

Prerequisite

Undergraduate prerequisite: HORT 3620-3620L or GENE/BIOL 3200 or permission of major professor. Instructor will waive prerequisite if student has had reasonable exposure to genetics in another course.

Course outline

1. What Is Plant Breeding?
2. The Genetic Basis of Plant Breeding.
3. Modes of reproduction and Types of Cultivars
4. Phenotyping
5. Line Development and Clonal Selection
6. Hybrid Development and Population Improvement
7. Breeding with Major Genes and Molecular Marker
8. Crop-specific Breeding Programs
9. Cultivar Increase, Maintenance, and Seed Production

Grading policy

For all students, grades will be based on in-class participation (10%), quizzes (5%), a project/term paper (25%) and three exams (including the final) (60%, each exam counts for 20%). Exams will cover all materials covered in class, including guest lectures, discussion topics, papers and online resources. The final exam will be comprehensive. Late submission of the term paper/project will result in a 10% reduction in grade for each tardy 24-hour period (or fraction thereof).

General Exam Policy and Policy for make-up of examinations

Cell phones need to be silenced and cannot be used as calculators during exams. Please let the instructor know in advance if you are going to miss an exam. Missing exams without prior notification and/or a legitimate reason will result in a zero grade for that exam.

There will be no bathroom breaks allowed during exams. If a student has a medical condition that will require them to go to the bathroom during exams, an exception to this policy need to be obtained from the instructor before the exam day.

All make-up exams will be in the form of a one-on-one oral exam.

Required course material

Author: Bernardo
Title: Essentials of plant breeding
Publisher: Stemma Press
Edition: 1st
ISBN: 978-0-9720724-2-7

Students will be supplied with additional reading materials as the class progresses.

ACADEMIC HONESTY POLICY

All academic work must meet the standards contained in "A Culture of Honesty." All students are responsible to inform themselves about those standards before performing any academic work. See: (<http://www.uga.edu/honesty/>)

Notes:

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.
