PLANT BREEDING AND GENETICS
PLANT SCIENCE 3225
3 CREDITS

INSTRUCTOR:
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PREREQUISITES:
Plant Science 2110 or equivalent

DESCRIPTION:
Mendelian genetic principles and related genetic developments applicable in plant breeding. Discussion of established and new plant breeding procedures applicable to cultivar development.

REQUIRED TEXT:

GRADING:
Three exams 60%
Quizzes 20%
Comprehensive Final 20%

No makeup exams will be given unless approval is given in advance. If you miss one of the regular three scheduled examinations, the final will make up the difference. For example, if you miss one scheduled regular exam, the final will now represent 40% of your grade.

POLICIES:
Academic Honesty
Complete academic honesty will prevail in this class. Independent work is required on examinations and quizzes. I trust you and expect nothing to interfere with that trust. Academic dishonesty will be penalized severely and reported to the Dean.
Americans with Disabilities Act
If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class, or at my office.

LECTURE TOPICS:

1. Plant Breeders and Their Work
2. Reproduction in Crop Plants
3. Gene Recombination in Plant Breeding
4. Quantitative Inheritance in Plant Breeding
5. Variations in Chromosome Number
6. Breeding Horticultural Crops
7. Fertility-Regulating Mechanisms and Their Manipulation
8. Molecular Biology: Applications in Plant Breeding
9. Breeding Self-Pollinated Crops
10. Breeding Cross-Pollinated and Clonally Propagated Crops
11. Breeding Hybrid Cultivars
12. Breeding Objectives and Techniques
13. Germplasm Resources and Conservation
14. Cultivar Increase, Maintenance, and Seed Production