

Syllabus
H&CS 694
Seed Evaluation and Enhancement
Spring Quarter Alternate Even Years

Instructors: Dr. Miller McDonald
Dr. Mark Bennett

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Office: 321 B Kottman Hall
312 A Kottman Hall

Hours:

Assistant: Andrew Evans, R.S.T. (Registered Seed Technologist)

Course Description: A laboratory-based course emphasizing techniques used in seed quality evaluation and enhancement.

Prerequisite: HCS 420, Seed Science, or equivalent is recommended

Credit Hours: 3 Hours

Meeting Times: (1 lecture/2 2-hr labs)

Lecture: M 10:00 333B Kottman Hall

Lab: T Th 9:00-11:00 321 Kottman Hall

Holidays:

Memorial Day

Reading List: Seed Technologists Training Manual, Society of Commercial Seed Technologists (2001). Rules for Seed Testing, (1999). International Seed Testing Association Rules for Seed Testing. (2005). Association of Official Seed Analysts. Seedling Evaluation Handbook. (1992). Association of Official Seed Analysts.

Purpose: To educate students in seed germination, purity, viability, vigor, health, cleaning and seed enhancement techniques.

Topics:

<u>Week</u>	<u>Topics</u>
1	Rules, RST, Sampling, Tolerances, Paired tests - McDonald
2	Seed ID, Purity testing - Evans
3	Germination testing - McDonald
4	Viability tests (TZ, fast green, indoxyl acetate, NaOCl, x-ray, embryo excision) - Evans
5	Vigor tests (AA, Cold, Conductivity, Speed of growth) - McDonald
6	Dormancy (Scarification, stratification, GA ₃ , leaching, light) - Evans and Bennett
7	Molecular biology (Genetic purity testing – PCR, electrophoresis, dormancy, development) – Jang
8	Seed Pathology – Miller
9	Seed Cleaning (Air-screen, gravity, table, spirals, indent, disks, velvet rolls, etc.) – David Tay
10	Seed Enhancement (Priming, pelleting) - Bennett

Evaluation:	<u>Criteria</u>	<u>Percent</u>
	Midterms	30
	Final Exam	20
	Lab	40
	Effort	10

Evaluation/Grading Scale:

A	93-100
A-	90-92
B+	88-89
B	82-87
B-	80-81
C+	78-79
C	72-77
C-	70-71
D+	68-69
D	60-66
E	<60

Students are graded individually and overall grades are not based on a bell curve (everyone can get an A). In other words, you are not competing among yourselves for grades. This method of grading encourages learning and cooperation among students.

**Examinations: Midterm
Final Examination**

The final examination will be comprehensive and is given during the time scheduled by the university. There will be no early administering of the final except to graduating seniors.

Laboratory: Labs meet twice per week and attendance is essential. You are expected to keep your own record of lab activities in a lab notebook. – Instruction on them will be given in week one, and throughout the quarter as appropriate. Notebooks will be handed in for grading on the last regular class meeting of the quarter.

Attendance: Attendance will not be recorded. However, students are encouraged to attend regularly. A significant portion of the information presented in the class is not in the textbook or lecture notes. Students who fail to attend class run the risk of missing that information. This information will be included in the examinations.

Academic and Disciplinary Misconduct: Academic and disciplinary misconduct will not be tolerated. Any instances of student misconduct or suspected academic misconduct will be handled according to policies of the Code of Student Conduct in the Student Handbook or Faculty Rule 3335-5-487 and will be reported through appropriate channels to the University Committee on Academic Misconduct or Judicial Affairs.

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES:

It is the student's responsibility to advise the instructor of chronic disabilities during the first week of the quarter. The instructor and student will work with the Office of Disability Services to provide appropriate accommodations. No special accommodations will be made for students who do not inform the instructor in a timely fashion, or who do not involve the Office of Disability Services. Temporary disabilities will be accommodated at the instructor's discretion.