SCHOOL OF AGRICULTURE

COURSE NUMBER: AGR 342                CREDIT HOURS: 3

I.   TITLE:

Seed, Crop, and Grain Analysis

II.  CATALOG DESCRIPTION:

Skills related to the evaluation of crops for quality relative certification, viability, and marketing will be taught. The subjects that will be taught include seed analysis, plant and seed identification, and grain grading. (Fall, odd years)

Prerequisite: AGR 240

III. PURPOSE:

To prepare students with the knowledge and techniques used to evaluate seed, crops, and grain. The skills learned from this course should help prepare the students for a range of different crop related careers. The topics are designed to help prepare students to compete in the National Crop Judging Contests that are sponsored by the American Society of Agronomy.

IV.  COURSE OBJECTIVES:

A. Identify a large variety of crops (seed and plants) from across the United States by their common name.
B. Recognize prominent weeds of the United States (seeds and plants).
C. Identify the major crop diseases.
D. Analyze seed samples for type of seed and impurities. Impurities may include other crops and/or varieties, prohibited noxious weeds, restricted noxious weeds, and common weeds.
E. Utilize the “Official United States Standards for Grain” to evaluate crop products for their market value.
F. Determine the correct grade of a grain sample.
G. Correctly identify factors that influence the quality of grain being analyzed.

V.   CONTENT OUTLINE:

A. Crop Identification
B. Weed Identification
C. Crop Disease Identification
D. Grain Grading
E. Seed Analysis

VI. INSTRUCTIONAL ACTIVITIES:
A. Individual study of crop, weed, and disease samples in the lab.
B. Exercises to assign grades to grain samples in the lab.
C. Analyzing the purity of seed samples.
D. Identifying impurities in seed samples.

VII. FIELD AND CLINICAL EXPERIENCES:
Lab Sections on:
A. Grain Grading
B. Plant and seed identification
C. Seed Analysis

VIII. RESOURCES:
A. Crop seed and plant samples.
B. Weed seed and plant samples.
C. Crop disease samples.
D. Seed analysis equipment.
E. Grain grading equipment.

IX. GRADING PROCEDURES:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly quizzes and projects</td>
<td>700</td>
</tr>
<tr>
<td>Attendance each class</td>
<td>200</td>
</tr>
<tr>
<td>Attend. Reg. Crop Contest or substitute assign.:</td>
<td>50</td>
</tr>
<tr>
<td>Attend. National Crop Contest or substitute assign.</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
</tr>
</tbody>
</table>

Grades are assigned as follows: 90%=A, 80%=B, 70%=C, 60%=D, Below 60%=E.

Not everyone will be able to attend the Regional or the National Collegiate Crops Contest. A team consists of 3 members; however, we will also take two alternates who will also compete individually. Factors that may determine who is able to go: (1) class scores prior to contest, (2) financial considerations for traveling. The students attending the Crop Contests will have to share in the travel costs. Students not able to attend the Crop Contests will be given alternative assignments.
X. **ATTENDANCE POLICY:**

Please refer to the most current copy of the *Murray State University’s Undergraduate Bulletin and Graduate Bulletin.*

XI. **ACADEMIC HONESTY POLICY:**

(Adopted by the MSU Board of Regents)

Cheating, plagiarism (submitting another person’s material as one’s own), or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, term papers, or the presentation on unacknowledged material as if it were the student’s own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.

NOTE: The School of Agriculture Faculty have adopted and implemented an Academic Honesty Policy in addition to the University Honesty Policy, which can be found in the current *Undergraduate Bulletin and Graduate Bulletin.* The policy sets guidelines regarding acts of dishonesty and the procedure to follow should an event occur. It is each Agriculture student’s responsibility to obtain and read a copy of this document. The School’s Academic Honesty Policy can be obtained by asking for a copy from any Agriculture Faculty member or the Secretary.

XII. **TEXT AND REFERENCES:**

The current year National Crop Judging rulebook will be required. Each student will also need to supply their own hand lens and tweezers for analyzing small seed samples.

XIII. **PREREQUISITES:**

AGR 240

XIV. **STATEMENT OF AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY:**

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or the provision of services
and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact Sabrina Y. Dial, Director of Equal Opportunity, Murray State University, 103 Wells Hall, Murray, KY 42071-3318. Telephone: 270-809-3155 (voice), 270-809-3361 (TDD).

XV. MSU SCHOOL OF AGRICULTURE CELL PHONE POLICY

The School of Agriculture recognizes that in today’s world cell phones are a familiar and often necessary form of communication for students.

It shall be the policy of the School that no cell phone usage shall be allowed in class and/or labs without the prior consent of the course instructor. This shall include verbal calling, incoming calls, email, text messaging, and use of cell phone calculators on tests and quizzes.

Cell phones must be kept off and out of sight (i.e. secured to a person’s belt or kept in a bag or purse away from desks and lab counters).

Should a student’s cell phone be visible, ring, or other form of unauthorized usage that is interruptive to the class or lab, the student may be asked to leave class and not return for that class/lab period.

Upon prior consent of the instructor, a student may obtain permission to have their phone on in case of an emergency or in critical family situations.

This policy also includes pagers and other electronic equipment such as blackberries and/or computers/laptops.