I. **TITLE:**

Agricultural Environmental Management Systems

II. **CATALOG DESCRIPTION:**

Study of animal waste, pesticide, and nutrient management practices in agriculture to reduce and control soil and water pollution and comply with Federal and state regulations.

III. **PURPOSE:**

Environmental regulation and compliance is prevalent in several aspects of agriculture. The purpose of this class is to introduce these requirements to agriculture students and help students learn how to prepare various pollution control management plans.

IV. **COURSE OBJECTIVES:**

Students completing the course will be able to accomplish the following:

A. Assess and understand general soil and water pollutant characteristics and impacts, recognize current regulations regarding runoff from agricultural areas, identify best management practices to control these impacts, and prepare surface water and groundwater protection plans.

B. Assess and understand nutrient and pesticide impacts on soil and groundwater and prepare nutrient management plans.

C. Assess and understand animal waste impacts on soil and groundwater and identify technologies used to control the impacts of these wastes.

V. **CONTENT OUTLINE:**

A. Soil and water pollutants, sources, and impacts.
B. Surface water and groundwater hydrology.
C. Regulatory compliance for surface water protection (TMDLs).
D. Preparation of surface water, ground water, and nutrient management plans.
E. Best management practices for surface and groundwater protection.
F. Animal waste sources, quantities, and impacts.
G. Animals waste treatment technologies and other management techniques.
VI. INSTRUCTIONAL ACTIVITIES:

A. Guidance and Lecture
B. Student Reports and Presentations
C. Field trips to observe management practices
D. Laboratory analyses

VII. FIELD AND CLINICAL EXPERIENCES:

The course will include laboratory analyses of water and waste samples and inspection of actual best management practices.

VIII. RESOURCES:

A. Federal Agricultural Offices
B. State Agricultural Offices
C. Country Agricultural Offices
D. Private Agricultural Offices
E. Personnel from these offices will provide relevant information

IX. GRADING PROCEDURES:

Class Participation - 15 %
Student Reports - 10 %
Homework - 20 %
Quizzes - 20 %
Final Exam - 15 %
Lab Exercises - 20 %

90-100 % A
80-89 % B
70-79 % C
60-69 % D
Below 60 % E

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:

Agriculture and Environmental Change, John Wiley and Sons.

XIII. PREREQUISITES:

None

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.