SCHOOL OF AGRICULTURE

COURSE NUMBER: AGR 377  CREDIT HOURS: 3

I. TITLE:

Agriculture Safety

II. CATALOG DESCRIPTION:

This course is a study of the hazards, methods of injury prevention, safety education, and regulations for advancing safety and health in the agriculture industry. (Fall and Spring)

III. PURPOSE:

A. To disseminate an understanding of the nature and significance of accident prevention or loss in production agriculture.
B. To develop need competencies in recognition and prevention of hazards.

IV. COURSE OBJECTIVES:

A. To develop a working knowledge of the fundamentals of safety and health as it applies to production agriculture.
B. To provide educational strategies for learned safety behavior in production agriculture.
C. To promote safety and health to advance production agriculture.
D. To promote the role of servicing and maintaining equipment to prevent hazards.
E. To develop an understanding of safety applied to tractors and other self-propelled machines.

V. CONTENT OUTLINE:

A. Safe farm machinery operation
1. Zeroing in on safety
2. Why worry about safety
3. Zeroing in on challenge to operators
4. Zeroing in on communication
5. Everybody business
6. Zeroing in on tractor accidents
7. Zeroing in on wagon accidents
8. Zeroing in on elevator accidents
9. Zeroing in on combine accidents

B. Human Factors
   1. Human limitations and capabilities
   2. Physical characteristics
   3. Physiological characteristics
   4. Psychological characteristics
   5. Personal Protective Equipment
   6. Lifting
   7. Man-machine systems

C. Recognizing Common Machine Hazards
   1. Introduction
   2. Pinch points
   3. Wrap points
   4. Shear points
   5. Crush points
   6. Pull-in points
   7. Free-wheeling parts
   8. Thrown objects
   9. Stored energy
   10. Slips and falls
   11. Slow-moving vehicle
   12. Second party

D. Equipment Service and Maintenance
   1. Keeping equipment in safe operating condition
   2. Who will do the job?
   3. Maintaining a hazard-free shop
   4. Emergency Situations
   5. Using service tools and equipment safely
   6. Chemicals and cleaning equipment
   7. Completing service work
   8. Components and systems

E. Tractors and Self-Propelled Machines
   1. Tractors
   2. Using tractors for their intended functions
   3. Making preoperational checks
   4. Operating the tractor
   5. Tractor upsets
   6. Falls from tractors
   7. Power takeoff accidents
   8. Hitching accidents
   9. Accidents on public roads
   10. Towing equipment
   11. Self-propelled machines

F. Tillage and Planting
   1. Sizing for safe operation
   2. Hitching
3. Machine operation
4. Agricultural chemicals
5. Environmental hazards

G. Chemical Equipment
1. Fertilizers
2. Pesticides
3. Kinds of exposure
4. Pesticide application equipment
5. Protective clothing
6. Pesticide storage
7. Pesticide dispersal
8. Pesticide poisoning
9. Poison emergencies

H. Hay and Forage Equipment
1. Introduction
2. Mowers and conditioners
3. Windrowers
4. Balers and bale ejectors
5. Bale handling system
6. Hay stackers
7. Stack movers
8. Big balers
9. Forage harvesters
10. Hay cubers
11. Forage wagons
12. Blowers

I. Grain Harvesting Equipment
1. Machine preparation
2. Field preparation
3. Adjusting and servicing combines
4. Driving the combine
5. Combine field operation
6. Moving combines on public roads
7. Header attachments
8. Corn pickers

J. Other Harvesting Equipment
1. Cotton harvesters
2. Potato harvesters
3. Sugar-beet harvesters

K. Materials Handling Equipment
1. Front-end loaders
2. Forklifts
3. Manure spreaders
4. Grain bins
5. Portable elevators and augers
6. Farm wagons
7. Silo unloaders
8. Crop dryers
9. Grinder-mixers

L. Farm Maintenance Equipment
   1. Rotary-type mowers
   2. Posthole diggers
   3. Post drivers
   4. Chain saws
   5. Lawn and garden tractors

VI. **INSTRUCTIONAL ACTIVITIES:**

Resource people, field trips, demonstrations, educational display models, participation in safety workshops, National Farm Safety and Health Week, videos, use of American Society of Agricultural Engineers (ASAE) Standards, and other appropriate classroom activities.

VII. **FIELD AND CLINICAL EXPERIENCES:**

On-site visits to production agriculture operations to analyze the work setting.

VIII. **RESOURCES:**

ASAE Standards, area farmers and businesses in the agriculture industry, safety experts with the commissioner of agriculture’s office, and library references.

IX. **GRADING PROCEDURES:**

A. Written examinations – major exams will be announced at least one week in advance. Exams will count 100 points each. The final will be comprehensive and will count as a regular 100-point test.
B. Labs – points will be given for each lab and lab report. Lab attendance is important since most of the labs cannot be duplicated.
C. There will be at least one 100-point Industry/School/Safety Farm Assessment as a major term project.
D. There will be required articles obtained from newspapers involving agriculture accidents for the class scrapbook.
E. There will be at least one PPT (PowerPoint Presentation) project either individually or as a group based upon a 100-point possible score.
F. Grades – grades will be assigned using the standard university scale as follows:

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<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>100-90</td>
<td>A</td>
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<tr>
<td>80-89</td>
<td>B</td>
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<tr>
<td>70-79</td>
<td>C</td>
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<tr>
<td>60-69</td>
<td>D</td>
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<tr>
<td>Below 60</td>
<td>E</td>
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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:**

Required text: *Ranch and Farm Safety Management* by John Deere

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
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.