

AMC 424 Course Syllabus

Course Description Principles and strategies for implementing safety training and reducing risk of injuries in agricultural enterprises including shop and machinery operations, chemical applications, livestock handling, transportation, and farm-based recreation. Prerequisite: Junior or instructor approval.
Hours: 3 Lecture Lab/ Clock Hours (2 lecture, 2 lab).

Text No specific text is required, but extensive reading from web-based sources is.

Lecture Lecture is web-based and consists of eight specific online modules through eCollege. These modules consist of print notes (summarizing general points), fact sheets (publications from Cooperative Extension Sources and other governmental agencies), slide presentations (from various sources), related websites, and video clips.

Field/Lab Activities Field activities will consist of the additional self-study activities either online or site-based in farm and/or school lab settings. Approximately, eight lab hours will be devoted to field investigation that includes conducting a *safety audit and survey* of a farm or school agricultural sciences/mechanization or horticultural lab. An additional eight hours will be dedicated to the review and completion of online training related to rural recreational safety (hunter or boater safety). Additionally, there will be 16 hours of direct lab instruction on campus/at university farm that focuses on training/demonstrating safe operation of farm machinery, especially tractors.

Grading

Possible Points

Online discussion and participation	160
Online connect time and object/tool utilization	100
Mid-Semester Exam	100
Field-Based Projects	400
Pesticide/HAZMAT Activity	100
Final Exam or Service Project	<u>100</u>

Total Possible Points **960**

Your Final Grade = $\frac{\text{Total Points Earned}}{960}$

Student Learning Outcomes

Upon completion of this course the student should be able to:

1. Recognize potential hazards in farm, ranch, and agricultural education workplaces.
2. Interpret historical trends, recommended guidelines, and laws related to agricultural safety.
3. Conduct a safety inspection of power tools, equipment, and/or machinery.
4. Conduct a safety inspection and audit of a farm shop, livestock facility, and/or greenhouse.
5. Safely operate a farm tractor, including the proper hitching of implements and machinery.
6. Apply basic first aid and emergency response techniques.
7. Interpret *OSHA* regulations and *NIOSH* guidelines for safety of farm workers.
8. Interpret *Operator's Manuals* and other technical publications related to maintenance/operation.
9. Discuss social and economical implications related to accidents and injury of farm workers.
10. Discuss/recognize appropriate handling and restraint techniques when working with livestock.
11. Identify/demonstrate/describe safe procedures related to
 - Pesticides and other hazardous materials,
 - Farm-based and rural recreational activities (hunting, fishing, boating),
 - Farm shop operations,
 - PTO driven machinery
12. Prepare machinery/implements for road travel and/or transport.
13. Identify, select, and demonstrate safe use of common farm hand tools and power tools.
14. Demonstrate appropriate behavior and cleanup for the agricultural workplace.
15. Conduct basic training exercises for agricultural employees/youth/students.

AMC Graduate/Professional Distinction Requirements

Students registered for **graduate credit** are required to complete all lecture activities associated with AMC 424, designated field activities and additional activities deemed relevant for graduate credit. These additional requirements consist of **one** of the following activities:

- ___ Review (one page abstract) of four research articles related to course.
- ___ Attend workshop (three hour minimum) related to ag/ recreational safety.
- ___ Complete a 6-8 page (APA format) term paper on a relevant topic such as training or changing attitudes or behaviors regarding *pesticide safety, shop safety, or prevention of farm accidents*.
- ___ Develop a 3-5 minute informative video clip on ag/ recreational safety suitable for post to Youtube.

Course Assignments & Activities Online Discussion

Each module will present one or more issues or topics for online discussion. Each post will be evaluated for its relevance and contribution to the discussion. A maximum of 12 points per module is available from discussion participation. A single relevant entry will merit 12 points with additional points (up to 8 per module) for multiple posts/responses.

Laboratory Activities

There are two scheduled on-campus lab activities (**June 12 & July 3**) and two that are self-directed. Directions and locations for each lab will be emailed to students as well as how to submit lab reports.

Field Activity #A Self-Directed Safety Audit

The student will conduct a safety audit of an agricultural education facility or farm using checklists provided by the professor.

Field Activity # B Rural Recreation Training and Certification

The student will complete the Texas Parks and Wildlife Online Training and complete the online *practice test* for either Hunter Safety or Boater/Watercraft Safety. The score on the practice test will be submitted for evidence of unit completion.

Graduate/Professional Distinction Project (s)

The activities are listed elsewhere in the syllabus. More details will be provided later.

Mid-Semester Exam

The mid semester exam will consist of multiple choice, true-false, and matching items that assess the student's understanding of the basic concepts of general agricultural safety as well as the principles of safe tractor and machinery operation. A grade of 70 (or additional tutorial activities) is required prior to participation in the Laboratory Activity #2 related to independent operation of tractors and farm machinery.

Pesticide and Hazardous Materials Exercise

The student will complete a series of activities related to pesticide safety, hazardous materials communication, right-to-know laws and employee training requirements. This exercise will include a written exam or similar assessment (to be announced) upon completion of the series of instructional activities.

Final Exam or Service Project

The final exam will consist of a comprehensive set of multiple choice, true-false, matching, identification, and short discussion/explanation items. Test items will encompass all concepts covered in the course.

Students may conduct an instructor approved *service project* relevant to agricultural safety instead of taking the final exam. However, the project must be approved and completed prior to final exam week. Otherwise the final exam is required. Acceptable service projects would include serving as a *program speaker* or *project assistant* on an agricultural safety topic at a 4-H or FFA meeting; speaking to a middle school or high school agriculture class on an approved topic; assisting with a Texas AgriLife Extension/4-H Safety Clinic or Field Day; providing safety training at a producer field day; conducting safety related research project; or developing a grant proposal to fund a safety training program or project later in the year.

Topic Outline

Rationale: To assist the student in developing appropriate knowledge, skills, and attitudes related to safety in and around the agricultural workplace and rural recreational environments. Emphasis will include identification of potential hazards as well as leadership and training methods used reduce the risk of injury or fatality in these settings.

- I. Safety on the Farm and in Rural Areas
 - A. Nature of Agricultural Hazards
 - B. Children and Youth on the Farm
 - 1. North American Guidelines for Children's Agricultural Tasks
 - 2. Hazardous Occupations Order in Agriculture
 - 3. Child Labor Laws
 - C. Right-to-Know Laws
 - D. Personal Protection Equipment
 - E. Basic First Aid and Emergency Response Plans
- II. Safety Around Animals
 - A. Livestock Behavior
 - B. Hazards Associated with Food Animals
 - C. Hazards Associated with Equine and Companion Animals
 - D. Transporting Livestock and Horses
 - E. Critters
- III. Tractor and Machinery Safety
 - A. Issues in Tractor Safety
 - 1. Injuries and Fatalities
 - 2. Case Studies
 - B. Tractor and Machinery Hazards and Safety Equipment
 - 1. Rollovers and Runovers
 - 2. Power Take-Off
 - 3. Belts, Chains, Augers, etc.
 - 4. Others
 - C. Maintenance and Safety
- IV. Pesticides and Other Hazardous Materials
 - A. Reading and Interpreting Material Safety Data Sheets
 - B. Interpreting Pesticide Labeling

- C. Safe Handling of Ag Chemicals
 - V. Shop Safety
 - A. Electricity and Power Tool Safety
 - B. Welding Safety
 - C. Flying and Falling Objects
 - VI. Safety for Rural Recreation
 - A. Hunter and Firearm Safety
 - B. Bodies of Water
 - C. ATV Safety
 - VII. Safety Audits, Inspections, and Attitudes
 - A. Purpose and Types of Safety Audits
 - B. Performing On-Site Inspections and Interviews
 - C. Attitudes that Promote or Prevent Safe Practice
 - VIII. Training for Safe Work and Play
 - A. Types of Training Programs
 - B. Materials, Resources, and References
 - C. Developing a Training Plan or Lesson
 - D. Grant Funding for Safety Initiatives
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Professionalism Students are expected to attend laboratory as scheduled. Their participation in class discussion and instructional activities should follow the basic principles of common courtesy and decency. Rude and disruptive behavior, as well as cheating, in any form, will not be tolerated. The use of tobacco products in laboratory or field trip sites is prohibited. Inappropriate conduct will not be tolerated. Failure to comply with professor's guidelines may result in suspension from class for the remainder of the day's instruction. Repeat offenses may result in additional consequences.

Reasonable Accommodations Requests from students with disabilities for reasonable accommodations must go through the Academic Support Committee. For more information, contact Coordinator of Disability Services at 903/886-5835.

Personal Protection and Responsibility Students are expected to dress appropriately for agricultural field work during on-campus (or university farm) lab activities. **All students must provide their own safety glasses and ear protection.** These may be purchased at local hardware or sporting goods stores.

Dr. Williams' Office Hours The following office hours are the official times that I will be available for drop-in student consultation. I have an open door policy and will try to assist students any time that I am available. However, advising, outreach and research activities may prohibit immediate drop-in service. Wednesday 1-4

The professor reserves the right to modify this syllabus during the semester, if needed. The instructor also reserves the right to extend credit for alternative assignments, projects, or presentations on an individual basis when determined to be in the best interest of the student and class activities.