BARTON COMMUNITY COLLEGE
COURSE SYLLABUS

I. GENERAL COURSE INFORMATION

Course Number: AGRI 1125
Course Title: Fertilizer Management
Credit Hours: 3
Prerequisites: None
Division/Discipline: Workforce Training & Community Education/Agriculture, required for Crop Protection Program. Elective for A.A.S. in Agricultural Business Management and A.S. in Agriculture.
Course Description: This course is an overview of essential plan nutrients of crop production, their functions in plants, sources of these nutrients, environmental considerations, and the rules and regulations regarding their proper environmental and economic use.

II. INSTRUCTOR INFORMATION

III. CLASSROOM POLICY

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The college assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

The College reserves the right to suspend a student for conduct that is detrimental to the College's educational endeavors as outlined in the College Catalog.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. Learn the rules of, and avoid instances of, intentional or unintentionall plagiarism.

Anyone seeking an accommodation under provisions of the Americans with Disabilities Act should notify Student Support Services. Additional information about academic integrity can be found at the following link: http://academicintegrity.bartonccc.edu/

IV. COURSE AS VIEWED IN THE TOTAL CURRICULUM

This course is designed for students to increase their literacy regarding plant nutrition and the effects of plant nutrition on crop health. Students will learn the essential crop nutrients; their functions in crop plants; the proper rates application methods based on crop and environmental considerations; safe methods of application; and the use of fertilizers in an environmentally safe manner.

V. ASSESSMENT OF STUDENT LEARNING

Barton Community College is committed to the assessment of student learning and to quality

education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

A. Acquire a basic understanding of the nutrients essential for crops to complete their life cycles.
   1. List the seventeen essential crop nutrients and their role in the plants life cycle.
   2. List organic and inorganic forms of fertilizer nutrients and how this impacts fertilizer application and environmental considerations.
B. Understand how fertilizer sources affect fertilizer types and cost.
   1. List the sources of fertilizer nutrients.
   2. Accurately describe in general terms fertilizer manufacturing techniques.
   3. List the inputs for common fertilizers.
   4. Explain how manufacturing processes effect price.
C. Demonstrate the ability to use environmental and cultural considerations properly when determining appropriate crop fertilizer rates, sources, timing, and placement.
   1. List and accurately explain the effects of the soil environment and weather on fertility programs.
   2. List and define how cropping systems affect fertilizer management decisions.
   3. Demonstrate the ability to select, based on crop and environmental considerations, the proper fertilizer source and application method.
   4. List and accurately describe fertilizer management decisions and techniques minimizing negative environmental impacts.
D. Develop necessary skills to develop integrated fertilizer management programs and the mathematical skills for that program.
   1. Demonstrate the ability to develop a fertilizer management program designed to minimize crop stress and economic risk.
   2. Accurately determine using appropriate mathematical formulae total crop nutrient needs, nutrient amounts necessary to supple those needs, and the amount of different fertilizers to supply those needs.

VI. INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS

VII. TEXTBOOKS AND OTHER REQUIRED MATERIALS

VIII. REFERENCES

IX. METHODS OF INSTRUCTION AND EVALUATION

X. ATTENDANCE REQUIREMENTS

XI. COURSE OUTLINE