**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

1. **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.

1. **INSTRUCTOR INFORMATION**
2. **COLLEGE 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.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu)

1. **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.

1. **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:

1. 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.
2. 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.
3. 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.
4. 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.

1. **INSTRUCTOR’S EXPECTATIONS OF STUDENTS IN CLASS**
2. **TEXTBOOKS AND OTHER REQUIRED MATERIALS**
3. **REFERENCES**
4. **METHODS OF INSTRUCTION AND EVALUATION**
5. **ATTENDANCE REQUIREMENTS**
6. **COURSE OUTLINE**