BARTON COMMUNITY COLLEGE
COURSE SYLLABUS

I. GENERAL COURSE INFORMATION

Course Number: AGRI 1108
Course Title: Farm Crop Production
Credit Hours: 3
Prerequisites: None
Division/Discipline: Workforce Training & Community Education/Agriculture, Crop Protection Program, Agriculture Business Management.
Course Description: A study of traditional and nontraditional farm crops in Kansas including resources and techniques used to produce these crops using BMPs (Best Management Practices). This course emphasizes mitigating agricultural and economic risk.

II. INSTRUCTOR INFORMATION

III. COLLEGE POLICIES

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 to provide a background and understanding of crop production in Kansas, including traditional and new, less traditional crops. Students will gain an understanding of not only individual crops but their integration in cropping systems and the effects of climate, weather, and soil type on crop production. This course is intended for students in the Crop Protection Program, Agricultural Business Management and an elective for the A.S. Agriculture degree.

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. The objective of this course is to provide students with a background in traditional and emerging crops to allow them the knowledge to develop crop production systems for Kansas that are sustainable agriculturally and economically.

B. Develop a basic understanding of the ecologically factors important in crop production.
- **1.** List and accurately describe the environmental factors determining crop production. These factors include:
  - a. The soil environment
  - b. Climate
  - c. Weather
  - d. Biota
- **2.** Given the environmental factors listed under item 1, explain the effects these factors have on crop selection and management practices.
- **3.** Identify and accurately describe the methods available to producers to manipulate the ecological factors of crop production and their effects.

C. Understand the role of plant nutrition is crop production and its effect on crop production.
- **1.** List the seventeen essential plant nutrients and their functions in plants.
- **2.** Accurately describe the effects of crops grown in Kansas on crop nutritional requirements under various cropping systems.

D. Acquire a basic background of traditional and nontraditional crops grown in Kansas and the Southern Great Plains, including plant growth, cultural practices, fertility requirements, and potential pest problems
- **1.** List the traditional crop plants for Kansas and their production practices. Traditional crop plants include:
  - a. Hard red winter wheat
  - b. Grain sorghum
  - c. Corn
  - d. Soybeans
  - e. Alfalfa
  - f. Traditional forage crops
  - g. Sunflower
- **2.** List the nontraditional crop plants for Kansas and their production practices. Nontraditional crop plants for Kansas include:
  - a. Winter canola
  - b. Barley
  - c. Triticale
  - d. Sesame
  - e. Cotton

E. Understand how to construct crop rotations using the crop plants in competencies D 1 and D 2 with emphasis on minimizing agronomic and economic risk.

1. List and discuss the reasoning behind crop rotation choices.

2. Accurately list the potential challenges of various crop rotations based on differing environmental factors across the state

F. Compare and contrast conventional and organic crop production systems.

1. List and define the differences between conventional and organic crop production practices.

2. List and accurately describe the advantages and disadvantages, both agronomically and economically, for both conventional and organic crop production.

G. Demonstrate the ability to apply mathematical concepts appropriate to crop production.

1. Use appropriate crop production mathematical formulae to determine the following:

a. Fertilizer needs
b. Pesticide needs
c. Seeding rates
d. Plant density
e. Irrigation rates
f. Yield

H. Develop a basic understanding of crop production terminology.

1. List and define common agronomic terms in crop production.

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