

I. COURSE INFORMATION

- A. Agriculture 214 Crop Science
- B. 4 credit hours
- C. Waldren, Richard. *Introductory Crop Science*. 7th ed. New Jersey: Pearson, 2014. Stubbendieck, Coffin, and Landholt. *Weeds of the Great Plains*. Nebraska Department of Agriculture, 2003
- D. Prerequisites: None

II. COURSE DESCRIPTION

This course will examine the basic principles of plant and crop science. We will examine the production, classification, structure, physiology, ecology, and reproduction as well as the usage, preservation, storage and identification of economic plants. After completion of this course, the student will be familiar with the identification and function of major crops and be able to identify the major environmental factors that threaten those plants.

III. LEARNING OUTCOMES

- A. Describe crop plants and recognize the important uses of crops
- B. Classify major crop plants and seeds by their features
- C. Distinguish between monocot and dicot crops by their vegetative and reproductive structures
- D. Identify the growth stages of monocot and dicot crops and relate critical events at each stage to crop management strategies
- E. Understand the importance of nutrients for plant growth and discuss soil relationships in crop production
- F. Appraise the impact of insect pests, crop diseases and weeds on crop production and management
- G. Apply the principles of genetics to understand crop improvement
- H. Recognize career opportunities in crop science

IV. MAJOR CONTENT AREAS

- A. Introduction to crop science
- B. Crop growth and reproduction
- C. Crop metabolism, climate, and weather
- D. Soils
- E. Cropping systems and water management
- F. Crop pests and diseases
- G. Weeds and weed control
- H. Crop improvement, harvesting, and storage

V. ASSIGNMENTS (may include but are not limited to)

- A. Unit exams
- B. Lab worksheets
- C. Plant collections
- D. Comprehensive final exam

VI. EVALUATION METHODS (may include but are not limited to)

- A. Attendance and participation
- B. Assignments
- C. Plant collections
- D. Quizzes and exams