

I. COURSE INFORMATION

- A. Agriculture 224 Soil Science
- B. 4 credit hours
- C. Brady and Weil. *Elements of the Nature and Properties of Soils*. 3rd ed. New Jersey: Pearson/Prentice Hall, 2009
- D. Prerequisites: CHE 125 College Chemistry I

II. COURSE DESCRIPTION

This course includes the study of basic chemical, physical, and biological properties of soils as well as their information, fertility, and usage.

III. LEARNING OUTCOMES

- A. Discuss the importance of soils to agriculture and the world economy
- B. Identify and describe the physical properties of soils
- C. Discuss soil water as to its movement in the soil and its relationship to plants
- D. Discuss the importance of soil minerals and soil organic matter
- E. Apply the concepts of soil chemistry to soil fertility, its use and management
- F. Demonstrate the ability to interpret a web Soil Survey map and determine land use and soil management practices as they apply to given areas
- G. Identify soil compaction and soil erosion problems and discuss their causes
- H. Discuss soil formation and the classifying of soils as to their physical properties

IV. MAJOR CONTENT AREAS

- A. Introduction to soils
- B. Formation of soils
- C. Soil classification
- D. Soil physical properties
- E. Soil water
- F. Soil acidity, alkalinity, aridity and salinity
- G. Soil organic matter
- H. Soil fertility
- I. Soil erosion and control

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

- A. Assignments
- B. Lab assignments
- C. Exams

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

- A. Attendance and participation
- B. Assignments
- C. Quizzes and exams