

**Date:** Spring 2007

**I. Course Name:** Plant Structure and Function  
**Prefix and Number:** BIO 251  
**Credit Hours and Contact Hours:** 4 credit hours - 6 contact hours  
**Course Description:**

An integrated approach to the study of plant anatomy and physiology, dealing with both the total plant and its constituent parts. Emphasis is on plant growth, development and regulatory mechanisms. The student will follow the growth of a plant from germination to maturity, examining its anatomical and physiological development. Three hours lecture; three hours laboratory.  
Prerequisite: BIO 121.

**II. COURSE OBJECTIVES**

For students to gain and demonstrate an understanding of the growth and development of a plant from seed through maturity, senescence and death, including the influence of both internal and external factors.

**III. METHODS OF INSTRUCTION**

Plant Structure and Function is designed to allow flexibility of teaching. The two, three hour sessions allow deviation from the core of lecture, laboratory work and discussion. Students work on labs and receive individual instruction. Films, field work, and group work (consisting of question and answer sessions) are also included.

**Methods of Evaluation**

Four examinations  
Laboratory work  
Two quizzes

**VI. COURSE OUTLINE**

Introduction  
Plant Cells  
Plant Anatomy  
Growth and Development  
Tissue Culture  
Water Economy  
Mineral Nutrition  
Translocation  
Hormonal Control of Growth  
Dormancy, Senescence, Stress  
Light and Growth  
Photoperiod and Temperature  
Rapid Plant Movements  
Plant diversity