

## 2007-2009 Cal Poly Catalog

Updated Course Descriptions.  
For (former) printed catalog descriptions,  
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### Biological Sciences Department

#### **BOT–BOTANY**

##### **BOT 121 General Botany (4) GE B2 & B4**

The anatomy, physiology, reproduction, and importance of plants. 3 lectures, 1 laboratory. [Changed effective Spring 2008.](#)

##### **BOT 221 California Plants and Plant Communities (4) (Also listed as LA 221)**

Introduction to the horticultural characteristics and landscape design potential of California native plants, California plant communities, and associated vernacular plants. Includes experiences in field identification, basic planting design, installation techniques, and maintenance requirements. Required field trips. 2 lectures, 2 laboratories. Prerequisite: BIO 114 or BOT 121 or consent of instructor.

##### **BOT 238 Central Coast Flora and Vegetation (3)**

Field identification of native plants and plant communities of the California Central Coast. Factors that affect plant growth in natural environments. 2 lectures, 1 laboratory. Prerequisite: BOT 121.

##### **BOT 264 Diversity of Plants and Algae (4)**

Structure, reproduction, ecology, evolution and the economic significance of the major groups of plants and algae. 2 lectures, 2 laboratories. Prerequisite: BIO 162 or BOT 121 or consent of instructor.

##### **BOT 311 Plants, People and Civilization (4) GE B5**

Human uses of plants for food, beverage, medicine, fiber, recreation, and rituals. Uses of plants by different cultures throughout the world and the social, economical, and environmental importance of plants in our lives. 3 lectures, 1 laboratory. Prerequisite: One course from GE Area B2.

##### **BOT 313 Taxonomy of Vascular Plants (4)**

Introduction to classification and identification of vascular plants, emphasizing major plant families; field and herbarium techniques. 2 lectures, 2 laboratories. Prerequisite: BIO 162 or BOT 121.

##### **BOT 323 Plant Pathology (4)**

Comprehensive study of the causes and effects of disease in plants. Designed to lead to an understanding of the science and modern control methods. 2 lectures, 2 laboratories. Prerequisite: BIO 162 or BOT 121.

##### **BOT 324 Ornamental and Forest Pathology (4)**

Causes and effects of diseases of important ornamental and forest plants, disease agents (life cycle, host range, environmental relationships), and modern approach to control. 2 lectures, 2 laboratories. Prerequisite: BIO 162 or BOT 121.

##### **BOT 326 Plant Ecology (4)**

Plant communities, population dynamics, and effects of the following environmental factors on plant growth and development: soil, water, temperature, light, atmosphere, topography, organisms, and fire. 3 lectures, 1 laboratory. Prerequisite: BIO 114, BIO 162, or BOT 121.

##### **BOT 329 Plants, Food, and Biotechnology (4) GE Area F (Also listed as HCS 329)**

Agriculture as applied biology and its impact on civilization. Application of technology to increase the efficiency of food production. Genetics and biotechnology; culminating in an assessment of genetically engineered foods, the myths, the controversy, the science. 3 lectures, 1 laboratory. Prerequisite: Junior standing, completion of GE Area B, and one of the following: BIO 111, BIO 161, BOT 121, HCS 120.

##### **BOT 334 Morphology of Vascular Plants (4)**

Phylogenetic relationships of the plant kingdom as illustrated by comparative morphology of the vascular plants including living and fossil forms. 2 lectures, 2 laboratories. Prerequisite: BIO 160, BOT 162 and BOT 313.

##### **BOT 335 Plant Anatomy (4)**

Microscopic study of vascular plants dealing with the origin, development and structure of cells, tissues and organs. 2 lectures, 2 laboratories. Prerequisite: BIO 162 or BOT 121.

##### **BOT 431 Advanced Plant Pathology (4)**

Methods, instruments, and materials used in diagnosis of plant diseases and in plant disease research. 2 lectures, 2 laboratories. Prerequisite: BOT 323 or BOT 324.

##### **BOT 433 Field Botany (4)**

Field studies of California's diverse vegetation and flora. Factors affecting the distribution of plants and plant communities and their ecological relationships. Identification of plants and plant communities in the field. Several field trips required including two weekend trips to California's deserts and mountains. 2 lectures, 2 laboratories. Prerequisite: BOT 313 or consent of instructor.

##### **BOT 437 Phycology (4)**

Comprehensive examination of the ecology, life histories, functional morphology, physiology, and taxonomy of marine and freshwater algae. Laboratories emphasize species endemic to the central coast of California. 2 lectures, 2 laboratories. Prerequisite: BIO 162.

##### **BOT 450 Plant Biotechnology Laboratory (2) (Also listed as HCS 450)**

Application of genetic engineering technology to plants; methods of plant tissue culture and transformation. 2 laboratories. Prerequisite: BIO 303 or BIO 351 or CHEM 373.