

Course Syllabus

Department: Conservation / Horticulture

Date: August 18, 2009

I. Course Prefix and Number: BIO 151

Course Name: Plant Materials

Credit and contact hours: 3 Credit Hours, 3 Contact Hours

Catalog Description including pre- and co-requisites:

This course exposes students to the identification, selection, adaptation, and utilization of common ornamental and native plants in New York State. Landscape value and wildlife usage of plants will be discussed where appropriate. The student will gain identification proficiency in association with knowledge of plant pattern and environmental planning. Field trips to Canandaigua area plant viewing locations are included. (Also listed as HRT 151).

II. Course Outcomes and Objectives

Learning Outcomes:

Upon the completion of this one semester course students will be able to:

- A. Define and give examples for terms as they relate to deciduous and evergreen woody plant materials and herbaceous plant materials: family, genus, species, cultivar, botanical name, binomial, common name, hardiness zone, height, form, dwarf, growth rate, leaf shapes, flower type, inflorescence, texture, density, ornamental interest, seasonal interest, landscape use, cultural requirements, native habitat, and limiting factors.
- B. Recognize a selected number of plants and define their summer and, when possible, winter characteristics, cultural needs, and landscape uses.
- C. Differentiate between different plants with similar characteristics and correctly identify these different plants.
- D. Classify a selected number of plants into cultural characteristic or landscape use groups in preparation for landscape design, maintenance, and problem diagnosis.
- E. Evaluate the cultural conditions for a variety of landscape situations and propose plant material selection to meet a variety of aesthetic needs in those evaluated sites.

Relationship to Academic programs and curriculum:

This is a required, first semester course for the AAS Ornamental Horticulture degree and a required course for the Horticulture Certificate. It is a foundation course for successful understanding and usage of plants in a wide variety of required and elective classes and career paths.

College competencies addressed by the course:

| | |
|---|---|
| <input type="checkbox"/> writing | <input type="checkbox"/> ethics/values |
| <input type="checkbox"/> oral communications | <input type="checkbox"/> citizenship |
| <input type="checkbox"/> reading | <input checked="" type="checkbox"/> global concerns |
| <input checked="" type="checkbox"/> mathematics | <input checked="" type="checkbox"/> information resources |
| <input checked="" type="checkbox"/> problem-solving | <input checked="" type="checkbox"/> professional competency |
| <input type="checkbox"/> computer literacy | |

III. Methods of Instruction

Types of Course materials:

- ◆ Text books
- ◆ In-class lectures and workshops developed by instructor that relate to the specific topic to be covered
- ◆ In-class and outdoor hands-on identification of materials and plant identification parts
- ◆ Visual images presented in class with study guides provided by instructor
- ◆ Library resources

Methods of instruction:

- ◆ Lecture with handouts, power point, videos, and visual examples
- ◆ Demonstrations of plant materials and plant identification parts
- ◆ Workshops of guided learning and practice in techniques
- ◆ Individual feedback and group discussion following various segments of technique development
- ◆ Hands-on, in-class and in-field practice with various techniques

Assessment measures:

- ◆ Very short, weekly quizzes to assist and direct student in developing skills – open book
- ◆ Multiple small take-home assignments based on plant learning assignments
- ◆ Multiple written exams – closed book

Methods of Evaluation:

- ◆ Weekly quizzes to guide areas requiring additional focus by student
- ◆ Written exams to evaluate students increasing development of techniques and skills

- ◆ In-class and outdoor graded workshops

IV. General Outline of Topics covered

I. Introduction

- a. The Binomial System of Nomenclature for plants
- b. Monocots and dicots
- c. The differences between annual, biennial, perennial plants
- d. Calculations of garden area and quantities of plants required

II. Deciduous Woody Plants

- a. Twig morphology
- b. Leaf morphology
- c. Oppositely branched ornamental tree species
- d. Alternately branched ornamental tree species
- e. Ornamental deciduous shrub species

III. Coniferous Woody Plants

- a. Coniferous branch & bark morphology
- b. Cone morphology
- c. Coniferous ornamental woody tree species
- d. Ornamental coniferous and broadleaf shrub species

IV. Herbaceous Plants

- a. Sun perennials
- b. Shade perennials
- c. Groundcover perennials
- d. Annuals