

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
HRT 205 – SOILS (3 CR.)

Course Description

Teaches theoretical and practical aspects of soils and other growing media. Examines media components, chemical and physical properties, and soil organisms. Discusses management and conservation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

General Course Purpose

The purpose of this course is to provide the student with the fundamental principles and applied practices of soil science which relate to the production of horticultural crops, management of soils, or both.

Course Prerequisites/Co-requisites

Prerequisite: Chemistry (CHM) or Chemicals in Horticulture (HRT 125) or instructor's approval.

Course Objectives

Upon completion of the course students should be able to:

- Identify, use and conserve the different types of soils and soil less media used by horticulturists.
- Explain how soils affect their lives and their plants.
- Understand the chemical and physical properties of soils that affect plants, and learn how to manipulate them to improve plant growth.
- Test soil and interpret results.
- Describe the ecological roles of soil.
- Retrieve information on soils from a variety of resources.

Major Topics to be Included

- Origin, nature, and classification of soils
- Physical properties of soils and other growing media
- Chemical properties of soils
- Soil water, irrigation and drainage
- Organic matter
- Nutrition and types of fertilizers
- pH
- Applying fertilizers and lime
- Soil testing
- Soil organisms
- Soil conservation and erosion
- Soil as a slowly renewable resource
- Soil as a dumping ground
- Cropping and soil management
- How to locate sources of additional information