

HORT A109: KNOWING YOUR SOILS

| Item | Value |
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| Curriculum Committee Approval Date | 11/13/2024 |
| Top Code | 010900 - Horticulture |
| Units | 3 Total Units |
| Hours | 54 Total Hours (Lecture Hours 54) |
| Total Outside of Class Hours | 0 |
| Course Credit Status | Credit: Degree Applicable (D) |
| Material Fee | No |
| Basic Skills | Not Basic Skills (N) |
| Repeatable | No |
| Open Entry/Open Exit | No |
| Grading Policy | Standard Letter (S), • Pass/No Pass (B) |

Course Description

A nontechnical study of the fundamental concepts of soil science. Methods of investigations for the managements of soils and soil substitutes. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Diagnose and correct unfavorable soil consistency.
2. Prepare soils and mixes for optimum plant growth.

Course Objectives

- 1. Discuss soil pH, salinity, and fertilizers on plant growth.
- 2. Use the hand test method of soil texture diagnosis.
- 3. Identify the products used in for soil amending and for manmade soil-less mixes.
- 4. Discuss the importance of organisms in the soil.
- 5. Discuss how water behaves in various soil conditions.
- 6. Identify the major parent materials and physical properties of soils.
- 7. Realize the effects climate and various cultural practices on soils.
- 8. Discuss soil testing and sample taking and its relevance to soil management.

Lecture Content

The Nature of Soils: Soil formation and distribution Physical properties of soils Soil composition Soil substitutes Soils for plant growth Chemistry of soils Fertilizers Soil acidity and salinity Life in the soil Soil Diagnosis and Management Appraisal and evaluation Application of soil test recommendations Supplying water Soil drainage Tillage and cultivation Soil substitutes/soilless mixes Hydroponics Soil distribution

Method(s) of Instruction

- Lecture (02)

Instructional Techniques

Lectures illustrated with slides, demonstrations by the instructor, and interaction between students and instructor during lab sessions before class, in office hours, and by E mail.

Reading Assignments

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Writing Assignments

Full written exams.

Out-of-class Assignments

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Demonstration of Critical Thinking

Quizzes, examinations, essay, experiments

Required Writing, Problem Solving, Skills Demonstration

Full written exams.

Other Resources

1. Selected handout materials to be provided and distributed by instructor.