

Course Description

Understanding soil is essential for successful plant care and landscape management. This course explores the physical, chemical, and biological properties of soil, how they influence plant growth, and how horticulturists can assess and manage soils in containers, garden beds, and landscapes. You'll learn practical techniques for observing soil conditions, interpreting soil test data, and applying soil knowledge to irrigation, mulching, planting, and amendment decisions. By connecting soil science to plant health, this course equips horticulture staff with the tools to make informed, practical decisions that support plant establishment, long-term growth, and overall garden vitality.

Learning Objectives

After taking this course, you will be able to:

1. Identify key soil properties physical, chemical and biological properties and understand how they will impact water retention and drainage on-site.
2. Assess planting conditions in containers, garden beds, and landscapes using practical observation and basic soil tests to distinguish between ideal versus degraded soil.
3. Apply soil-water-plant knowledge to identify site issues like ponding, runoff, and rain shadows, adjusting watering and soil management accordingly.
4. Know where to send soils samples for analysis, proper sampling protocols, and reliable resources to determine when soil amendments are needed and when to escalate complex fertility or pH issues to a supervisor.
5. Differentiate between in-ground soil and container/potting media, selecting maintenance practices that address the unique drainage and aeration needs of each.
6. Implement soil-health practices using conservation methods such as mulching, cover cropping, and "no-till," to improve key soil properties.