

16:765:536 Plant Disease Clinic (3 credits)

Normally Offered:

Summer, even-numbered years

Instructor:

Taught by Dr. Bruce B. Clarke (Extension Specialist in Plant Pathology)

Pre-requisites:

11:770:301 (General Plant Pathology) or equivalent

Format:

Lecture and laboratory. The course meets every Tuesday (8:30 a.m. – 1:30 p.m.) from the fourth week in June through mid-August. A lecture and hands-on laboratory demonstration is presented each week. Four to five field trips to outlying research stations and arboreturns in the tri-state region are conducted on selected Saturdays during the course and focus on diseases of fruit, vegetables, turf, ornamental and field crops.

Description:

This is a practical, hands-on, graduate-level course in plant disease diagnostics. A wide range of biotic and abiotic diseases of economically important plants including vegetables, fruit, field crops, turfgrasses and ornamentals are studied in a laboratory setting.

The objective of the course is to help students gain a thorough understanding of the principles and practices used to identify plant diseases caused by fungi, bacteria, viruses and abiotic factors. Lectures, laboratories, interactive discussions, demonstrations and a series of field trips throughout the region are employed to teach the principles of plant pathology and disease diagnostics. Students use laboratory-grade microscopes, various isolation and culturing techniques and a collection of diagnostic references to identify plant diseases using a systematic approach to disease diagnosis. The course focuses on critical thinking rather than passive learning and encourages students to share their experiences in classroom discussions.

Examinations and Grading:

Students are required to identify the causal agents and discuss control measures for four plant diseases each week. They are graded on the accuracy of their disease diagnoses, quality of microscopic slides presented with sample submissions as well as their oral presentations and participation in class. A comprehensive written exam is given at the end of the course.

Other Requirements:

No textbook is required. Students have access to a disease diagnostic library of over 100 books as well as electronic references. Outlines and reference materials are distributed for each lecture and laboratory to assist students in organizing concepts and to provide sources for additional information. Attendance in lectures, laboratories and field trips is expected.

Course website:

turf.rutgers.edu/