Diseases and Insect Pests of Ornamental Plants 11:776:391 (3 credits)

MW 5th period (3:55 to 5:15 p.m.)
Room 138B Foran Hall

2013

Instructors: Dr. Ann B. Gould, Specialist in Ornamental Plant Pathology
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Course objective: The objective of this course is to familiarize students with common insect and disease problems that occur during the production and maintenance of ornamental plants in settings such as greenhouses and nurseries, residential properties, parks and recreational areas, and forested sites. Students will gain a basic understanding of the biology and ecology of these pests and the management of biotic and abiotic problems within a plant health care or integrated pest management context. In each class, several diseases or insect pests will be profiled.

Student profile: This course is designed for students interested in careers in applied plant management in urban landscapes, greenhouse and nursery production systems, and recreational green spaces such as parks and golf courses. This is an excellent course for those interested in plant biosecurity. Students interested in plant pathology and biology, entomology, and landscape architecture should consider taking this course to strengthen their background in pest recognition.

Learning goals:

• Recognize the major groups of pathogens and insects that affect ornamental plants in plant production, parks and forestry, or residential landscape settings
• Become familiar with the mechanisms that plant pathogens use to cause plant disease
• Become familiar with the mechanisms whereby insects cause damage to plants
• Be able to discuss methods for plant disease and insect management
• Be able to describe methods for plant disease and insect diagnosis

Prerequisites: General Plant Pathology 11:776:302 and/or Insect Biology 11:370:381 are required. Additional coursework in entomology, plant pathology, and the plant sciences is helpful.

Text: No text is required, but the following reference materials will be heavily utilized:
These volumes will be placed on reserve at Chang Library. Lectures will be supplemented with related texts, handouts, and materials also placed on reserve.

**Office hours:**
Gould and Buckley will be available after class, or by appointment. Use e-mail to contact the instructor.

**Lecture notes:**
Most outlines for lectures will be made available on the eCollege class website (look under “Lecture Notes” under “Document Sharing”) up to 12 hours prior to lecture. Students are encouraged to print these lecture notes and bring them to class. Unit lectures in their entirety will be made available for student viewing after they are presented in class.

**Attendance:**
Attendance is mandatory. A sign-in sheet will be provided in the classroom before and during class. Courtesy demands that students who are otherwise unavoidably detained should e-mail the instructor (gould@aesop.rutgers.edu) before or after class to explain the absence.

**Grading:**
Examination I: 30%
Examination II: 30%
Quizzes (12 quizzes): 20% of course
Homework: 2%
Attendance: 3%
Student written report: 15%

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Examinations and quizzes are composed of true-false, multiple choice, fill-in-the-blank, compare-and-contrast, matching, short answer, and essay questions.

Examinations will be given during regular class time. Weekly quizzes will be offered online.

Students may monitor their grades (as a percent of possible points) on the eCollege website.
**Class website:** Course materials (lecture materials, handouts, assignments, and grades) will be posted on the class eCollege website (http://onlinelearning.rutgers.edu/ecollege). Log in using your student NETID and follow the directions. Contact the helpdesk if you have difficulty (help@ecollege.rutgers.edu).

**Online quizzes:** Unit quizzes (15 points each) will be offered on-line weekly. Quizzes will be open to students each Thursday evening at 10:00 p.m. through 11:30 p.m. the following Sunday. Students will have one hour to complete each quiz. Although students may refer to class notes and other materials during quiz time, discussion of quiz questions and collaboration among students is distinctly discouraged. Use these quizzes as an opportunity to test your knowledge. Contact the instructor (gould@aesop.rutgers.edu) immediately if you have technical difficulty (for example, your internet connection kicks you out of the quiz before you have finished the quiz).

**Homework:** Completion of one or more homework assignments will be required. Reading and homework assignments, including due dates, will be posted with each unit on the class website. Completed assignments may be handed in during class or submitted electronically via e-mail or the unit dropbox.

**Writing assignment:** A writing effort is required from each student by Monday, April 15th. This written report is 15% of final grade.
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Lecture Outline

Diseases

Unit:

1 23-Jan  Introduction
1 28-Jan  Disease management and diagnosis
1 30-Jan  Pesticides for the ornamental industry
2 4-Feb   Diseases of forest and shade trees
2 6-Feb   
2 11-Feb  
3 13-Feb  Diseases of landscape plants
3 18-Feb  
3 20-Feb  
4 25-Feb  Diseases in field and container nurseries
4 27-Feb  
5 4-Mar   Diseases in the greenhouse
6 6-Mar   Diseases in the interiorscape
11-Mar  Exam I

Insects

Unit:

7 13-Mar  Introduction to insect pest management
7 25-Mar  Scouting and monitoring techniques
7 27-Mar  Insecticide selection and use
8 1-Apr   Borers: Weevils and bark beetles
8 3-Apr   Borers: Flatheaded and roundheaded borers
8 8-Apr   Borers: Clear-winged moths and other lepids
9 10-Apr  Piercing-sucking pests: True bugs
9 15-Apr  Piercing-sucking pests: Hoppers
9 17-Apr  Piercing-sucking pests: Plant lice
9 22-Apr  Piercing-sucking pests: Scales
10 24-Apr Defoliators: Beetles
10 29-Apr Defoliators: Lepids
10 1-May  Defoliators: Sawflies
10 6-May  Review
15 May  Exam II