

## **FES 458 - TREE PESTS AND DISEASE LAB**

Spring 2008 Revised May 11, 2008

### **DESCRIPTION**

A week-long field class where students will learn the process of identifying tree health problems, researching information about the problem, and developing management options to deal with the problem. The course will be offered during the first week of May term. Prerequisite: FES 456 or permission. Credits 1.

### **MEETING TIMES**

First week of May Term.

Monday-Friday 8am to 5pm (and later), Saturday 8am-noon. rm 213 Nutting

### **INSTRUCTOR**

William H. Livingston, Associate Professor of Forest Resources

Office: 116 Nutting Hall

Phone: 581-2990

E-mail: [WilliamL@maine.edu](mailto:WilliamL@maine.edu)

Appointments available by request

### **COURSE OBJECTIVES AND LEARNING OUTCOMES.**

Students will:

1. Learn to recognize signs and symptoms of tree health problems.
2. Correctly identify tree health problems for unknown samples.
3. Understand and utilize monitoring and assessment practices in forests.
4. Develop basic management options for dealing with the problem

### **INSTRUCTIONAL MATERIAL AND METHODS**

#### **Recommended references:**

Edmonds, R.L., J.K. Agee, and R.I. Gara. 2000. Forest Health and Protection. McGraw-Hill Co., NY. 630 p.

Adams, K.B., D.C. Allen, P.D. Manion, and L.P. Abrahamson. 1995. The Stewardship of Northern Hardwoods: A Forest Owner's Handbook. SUNY-ESF, Syracuse, NY. 83 p.

Skelly, J.M., et al., editors. 1987. Diagnosing Injury to Eastern Forest Trees. Agric. Inform. Serv., Coll. Agric, Penn. State Univ. and USDA For. Serv. 122 p.

#### **Required Materials.**

Hard hat, safety glasses, compass, hand lens, clothing for conditions (especially rain suit), sturdy boots, bug repellent, sun screen, water bottle, covered clipboard, notebook, laptop if you have one.

**Web Site.**

There is a web site for the class at:

<http://www.forest.umaine.edu/education/livingston/fes456/F456CourseInfo.html>

The web site contains class messages, files for lecture notes, links to required readings, recordings of lectures, previous exams, and some of the handouts.

**E-Mail.**

Each student will be asked to provide the instructor an e-mail address that can be used during the semester. E-mail will be used for sending questions to and messages between the instructors and students.

**Lecture Readings and Recordings.**

Students may want to review recordings and readings from FES 456 and 457. Copies of the readings not from the textbook and recorded lectures are available on-line.

**Class Activities**

1. Indoor sessions (on Monday, Tuesday (?), Wednesday) will provide instruction on identifying tree health problems based on provided samples. References and materials (e.g., microscopes, dissecting scopes) will be available. Basic aspects of an organism's lifecycle will be covered. The instructor will be available to answer questions and to provide guidance for identifying the samples. Students will keep a notebook of sketches and descriptions that will be graded. Grades will be based on the quality and completeness of the descriptions.
2. Outdoor sessions (afternoons on Monday, Tuesday, Wednesday, all day on Thursday and Friday) will bring students to forests that have tree health problems identified during the indoor sessions and others. The instructor or guest speaker will explain the development of the disease problems in the forest setting after which students will make measurements and observations. The notes and data will provide a basis for developing management recommendations for dealing with the disease. One or two forests will be visited each day. A 2-3 page report (similar to a HMP summary) and/or disease descriptions are expected for each of the forests visited. An overnight stay at a hotel will be likely on Thursday evening. Students will need to bring lunch on Thursday; the other meals will be covered by the course fee.
3. Research time will be available in the evenings and on Saturday for students to research and complete descriptions and write the reports for the outdoor sessions. The 2-3 page reports for each visited forest will summarize relevant parts of a Health Management Plan for that location. Reports, **in electronic format**, will be turned-in by the end of class on Saturday. Students can work in teams, but each student must write and complete their own papers. Grades will be based on the ability to provide key information, to make solid recommendations, and to write effectively. Graded reports with comments will be emailed to students one week after the last class period.

**COURSE GRADING.**

Disease Description	50%
Papers	50%
<b>Total</b>	<b>100%</b>

## CLASS SCHEDULE

Indoor Samples	fir needle cast, Lophodermium needle cast, anthracnose, tar spot, oak leaf blister, powdery mildews, common decays, Armillaria, blister rust, fir broom rust, cedar/apple rust, pine-pine gall rust, ash leaf rust, eastern dwarf mistletoe, Hypoxylon canker, black knot, frost crack, Dutch elm disease, Sudden Oak Death. These will be completed in the morning sessions and in the evening if more time is needed.
Monday	Morning – indoor samples Afternoon - outdoors: Penobscot Experimental Forest: Managing spruce/fir
Tuesday	Morning – indoor samples Beech bark disease control.
Wednesday	Morning – indoor samples Afternoon - outdoors: White pine and hardwoods.
Thursday	Field tour: Sudden Oak Death – <i>Phytophthora ramorum</i> monitoring, chestnut blight, butternut canker, Pine State Arboretum.
Friday	Field tour: Hemlock woolly adelgid, review
Saturday	Complete reports

## COMPLETION OF WORK

To earn credit for this class, all work must be completed. Also, any assignment turned in late will lose 10% of the grade value for each day late unless lateness is due to an excused absence.

## DISABILITY NOTICE

If you have a disability for which you may be requesting an accommodation, please contact Ann Smith, Director of Disabilities Services, 121 East Annex, 581-2319, as early as possible in the term.

## STUDENT BEHAVIOR

Every student in the class is expected to be familiar with the University's Student Conduct Code (<http://www.umaine.edu/handbook/>) part of which states, "It is expected that students will conduct their affairs with proper regard for the rights of others and of the University. All members of the University community share a responsibility for maintaining an environment where actions are guided by mutual respect, integrity, and reason." If the instructor believes that a student's behavior is violating this code or other codes in the Handbook, the instructor has the option to ask that the behavior cease and will seek advice from the appropriate office on campus on how to deal with the student's behavior.

## ACADEMIC INTEGRITY

Academic dishonesty includes cheating, plagiarism and all forms of misrepresentation in academic work, and is unacceptable at The University of Maine. As stated in the University of Maine's Student Conduct Code, plagiarism (the submission of another's work without appropriate attribution) and cheating are violations of the code. An instructor who has probable cause or reason to believe a student has cheated may act upon such evidence, and should report the case to the supervising faculty member or the Department Chair for appropriate action.

If you have questions about this policy or want examples on what is acceptable and unacceptable behavior, please speak with the instructor.