

INT 482

Pesticides and the Environment

Instructors

Dr. Andrei Alyokhin (course coordinator)
315E Deering Hall
E-mail: andrei.alyokhin@umit.maine.edu
Phone: 1-2977

Dr. John Jemison
495 College Ave.
E-mail: jjemison@umext.maine.edu
Phone: 1-3241

Meeting Time and Place

Tuesdays and Thursdays, 3:30-4:45 PM
Deering Hall, Room 17 (except on September 11, when we meet on the Rogers Farm)

Course Objectives

The overall goal of this class is to provide students with an ability to make informed decisions on using chemical and biological pesticides. More specifically, the students completing this course are expected to

- Understand concepts of pest and pest management
- Know major types and classes of pesticides
- Know the basics of pesticide application technology
- Understand economic issues involved in pesticide use
- Appreciate social, ecological and environmental consequences of pesticide use

General Course Description

Presently, humans rely on a vast arsenal of different chemical and, to a smaller degree, biological pesticides to suppress undesirable organisms in anthropogenic and natural landscapes. This course serves as an introduction to the properties and mechanisms of pesticides and their fate in the environment. This includes (but is not limited to) modes of action, application technology, environmental fate and transport, ecological backlash, economics, and government regulations. Alternatives to pesticide use are also discussed when appropriate, but lay outside of the major focus of this course.

Assigned readings

No textbook is required for this course. Additional reading will be assigned when a given topic is presented. Reading materials will be placed on reserve in the library. Students are expected to read **all** assigned materials. We do not necessarily intend to talk at length about material that is presented clearly in the assigned readings. If something remains unclear after reading a particular publication, please ask the instructor for clarification.

Attendance

Students are expected to attend **all** class sessions. Unexcused absence from tests will result in a **zero grade**. Make-up examinations will be allowed only by previous arrangement. If you are too ill to take a test, please contact instructor by phone or e-mail before the test and arrange to have a doctor’s note confirming your illness. Lecture sessions will start on time. Late entry into the classroom is distracting to other students and the instructor.

If you have a question during the lecture, ask it. It is highly likely that other students may have the same question or a similar question. If something remains unclear after the instructor has lectured on a topic, please ask him or her for clarification.

Students with disabilities

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.

Course Requirements

Examinations (three @ 20 points ea.).....	60
Homework assignments (four @ 2.5 points ea.).....	10
Project	
Paper.....	10
Presentation.....	20
Total points.....	100

A+ not assigned	A 93-100	A- 90-92
B+ 87-89	B 83-86	B- 80-82
C+ 77-79	C 73-76	C- 70-72
D+ 67-69	D 63-66	D- 60-62
F Below 60		

Please remember that examinations are based on material given **both in lectures and assigned readings**.

<u>Date</u>	<u>Topic</u>	<u>Instructor</u>
September		
2	Introduction.	Alyokhin
4	Pesticide Types and Formulations.	Alyokhin
9	Pesticide Application I. Sprayers and Their Calibration.	Alyokhin
11	Pesticide Application II. Practical Demonstration.	Alyokhin and Cannon
	Pesticide Application III. Safety Considerations. Topics are Due for the Project.	Alyokhin
16		
18	Principles of Toxicology.	Elskus
23	Pesticide Modes of Action.	Alyokhin
25	Pesticide Resistance.	Alyokhin
30	Pesticide Labels.	Alyokhin
October		
2	EXAM I.	
7	Insecticides.	Alyokhin
9	Fungicides.	Lambert
14	NO CLASS -- Fall Break	
16	Rodenticides, bactericides, miticides, nematocides, etc.	Alyokhin
21	Herbicides.	Gallandt
23	Economic Threshold Concept.	Alyokhin
28	Pesticides in the Integrated Pest Management I.	Alyokhin
30	Pesticides in the Integrated Pest Management II.	Alyokhin
November		
4	EXAM II.	
6	Pesticide Legislation I.	Jemison
11	Pesticide Legislation II. Getting an Applicator License.	Jemison
13	Pesticides in the Soil.	Jemison
18	Soil and Water.	Jemison
20	Fate and Transport I. Papers are Due for the Project.	Jemison
25	Fate and Transport II.	Jemison
27	NO CLASS -- Thanksgiving	
December		
2	Maine Issues/Maine water quality/pesticide issues.	Jemison
4	GMO's.	Jemison
9	Project Presentations I.	
11	Project Presentations II.	
Finals week		
	EXAM III.	