Syllabus: Entomology 403/803
Management of Horticultural Crop Insects
Spring 2009

Course Information

Instructor:

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Office Hours The best way to reach me is by email or text to my mobile. Expect a response within 2 hours, although I sometimes take a little longer. For on-campus students, contact me to arrange a meeting time. If I do not answer the phone, leave a message and I will get back to you as soon as possible. Calls at home are fine up until about 10 pm central time. I am on the computer a lot so we can also arrange chat times if you wish.

ABOUT THE COURSE

This course will focus on identification, biology, ecology and management of insect pests of horticultural crops, including vegetables, deciduous fruits and nuts, trees and shrubs, greenhouse crops, turf and ornamentals. Emphasis will be on Integrated Pest Management (IPM) strategies employed to maintain pests below damaging levels while minimizing the use of traditional insecticides. I strive to promote problem solving and critical thinking skills in this class.

COURSE OBJECTIVES

After completing the course, you should be able to:

1. Recognize beneficial and harmful arthropods associated with horticultural plantings
2. Explain the biology and ecology of arthropods associated with horticultural crops
3. Characterize types of plant injury and associate it with the arthropod pest that is responsible
4. Describe management tactics that are used to minimize injury by arthropod pests

INSTRUCTIONAL METHOD

Blackboard will be used for delivery of all materials pertinent to this course (lectures, asynchronous discussions, assignments, and assessment materials). Power Point presentations will be used to deliver lectures which will include text and images and will be strengthened by narration to emphasize key points. Asynchronous discussion threads will be used to assess student comprehension of lecture and reading materials.

TEXTBOOKS

THERE ARE NO REQUIRED TEXT BOOKS…..the following books are useful but are not required.

Davidson, R.H., and William F. Lyon, 1987. *Insect Pests of Farm, Garden, and Orchard*, eighth edition, John Wiley and Sons.
Borror, D.J. and R.E. White, 1998. *A Field Guide to Insects: America North of Mexico*, Peterson Field guide Series, Houghton Mifflin Co.

STUDENT ASSIGNMENTS AND EXAMS

Exams: There will be two examinations (midterm and final), both of which will be open book, and each worth 100 points. Exams will be delivered by email. Question formats will include definitions, short and intermediate length completion and essay formats.

I may experiment with online exams if time permits.

Dates: Midterm: Due March 15, 2009 and Final Exam: May 6, 2009

Quizzes: There will be two lecture quizzes, both open book, and consisting of essay, and fill in the blank, or multiple choice questions. Each quiz will be valued at 50 points, and delivered to you by e-mail attachment.

Like with the exams, I may experiment with online quizzes.

Dates: Quiz 1: Due February 15, 2009 and Quiz 2: April 11, 2009

IPM Summaries: Each student will receive a list of five insects for which he/she will gather the following information: identifying characteristics for damaging stages, description of damage, summary of life cycle, procedures for scouting, assessment (sampling) of populations, recognized economic thresholds, and a list of feasible management methods/control measures. Each summary will be worth 20 points. I will provide an example.

Due Dates: IPM Summary 1 & 2: February 22, 2009; IPM Summary 3 & 4: March 29, 2009; and IPM Summary 5: May 3, 2009

Library Research Paper (Graduate Student Requirement): Each graduate student will be

expected to write and submit one high quality, in-depth library research paper. The topic for the paper will be chosen by each student, but must be approved by the instructors in advance. Any course-related topic of special interest to the student can be considered (See assignment link). A second paper following the same format may be substituted for the insect collection.

Due Date: May 3, 2009

(Virtual) Insect Collection (Requirement for both undergraduate and graduate students):

This is a new exercise, to replace the standard insect collection…so please bear with me. This project will constitute 100 points of the total score for the course. A virtual insect collection must consist of at least 35 species, representing insects of horticultural significance. You can take your own pictures or just download one from the internet. For each insect you choose, in addition to providing a picture of it, you are responsible for providing the following information: (1) identification of species to ESA approved common name or identification to order and family, (2) type of metamorphosis, (3) how the insect is of horticultural significance. Please give credit to the photographer.

IF YOU WOULD RATHER TURN IN PROPERLY CURATED SPECIMENS (pinned or in vials) IN LIEU OR PHOTOS, YOU ARE WELCOME TO DO SO. But you will still be required to provide the information provided above.

Due Date: May 3, 2009

CHEATING:
The University of Nebraska-Lincoln has a policy about academic dishonesty, as indicated in the Student Code of Conduct (see Undergraduate Bulletin). As a student at UNL, you enjoy rights and protections under the code and are obligated to conduct yourself in compliance with the code.

As the Student Code of Conduct indicates, academic sanctions for misconduct subject to appeal are at the discretion of the instructor, and may include giving the student a failing grade for the course. In this course, the least penalty that will be imposed for misconduct is a one letter grade reduction in the course grade, but in most instances the penalty for cheating will be a failing grade in the course.

COURSE EVALUATION

Graduate Student Evaluation

Midterm Exam	100 points
Final Exam	100 points
Quizzes	100 points
IPM Summaries	100 points
Library Research Paper	100 points
Virtual Insect Collection	100 points
Total	600 points

Undergraduate Student Evaluation

Midterm Exam	100 points
Final Exam	100 points
Quizzes	100 points
IPM Summaries	100 points
Virtual Insect Collection	100 points
Total	500 points

Letter grades will be assigned based on straight percentages of 100 - 90% A range, 89 - 80% B ranges, etc.; however, we reserve the right to use a more lenient scale if needed.

SCALE

100 - 98	A+	89 - 87	B+	79 - 77	C+
97 - 94	A	86 - 83	B	76 - 73	C
93 - 90	A-	82 - 80	B-	72 - 70	C-
69 - 67	D+	59 - Below	F		
66 - 63	D				
62 - 60	D-				

Tentative Lecture Schedule

Lecture	Date	Topic
1	Jan 15	Course Overview
2	Jan 20	Classification of Insects and Other Arthropods
3	Jan 22	Putting Order into the Insect World
4	Jan 27	Putting Order into the Insect World
5	Jan 29	Insect Structure and Function
6	Feb 3	Insect Structure and Function
7	Feb 5	Internal Workings of Insects
8	Feb 10	Insect Growth and Development: Metamorphosis
9	Feb 12	Insect Ecology
10	Feb 17	Integrated Pest Management
11	Feb 19	Natural and Biological Control
12	Feb 24	Chemical Control
13	March 3	Pests of Vegetables (Grass Crops)
14, 15	March 5	Pests of Turfgrasses
16	March 10	Pests of Leguminous Vegetables
17	March 12	Pests of Solanaceous Crops
		Spring Break….go to the beach
18	Feb 27	Pests of Solanaceous Crops
19	March 24	Pests of Cucurbitaceous Crops
20	March 26	Pests of Cruciferous Crops
21	March 31	Greenhouse Insect Pests
22	April 2	Pests of Trees and Shrubs

23	April 7	Pests of Trees and Shrubs
24	April 9	Pests of Trees and Shrubs
25	April 14	Pests of Trees and Shrubs
26	April 16	Insect Pollinators
27	April 21	Pests of Deciduous Fruits
28	April 23	Pests of Deciduous Fruits
29	April 28	Pests of Deciduous Fruits and Nuts
30	April 30	Pests of Floral Plantings

ADA STATEMENT:

Students with disabilities are encouraged to contact Christy Horn for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY (updated 8/20/07)