

## FOR 426/626 FOREST ENTOMOLOGY

**Lecture:** T&TH 10-10:50am TNR 120

**Laboratory:** Mondays; sect 1: 10-11:50; sect 2: 12-1:50; labs held in TNR 360

**Instructor:** Dr. Holly A Petrillo, Professor of Forest Entomology and Pathology

**Office:** TNR 363      **Email:** hpetrill@uwsp.edu

**Office Hours:** T 11am-12pm; W 1-2pm; open door policy and by appointment

**LEARNING OBJECTIVES:** Upon completion of this course, students will be able to:

1. Identify insects common in forest ecosystems, in the Great Lakes region and world-wide, at the family, genus and species level.
2. Diagnose common insect damage and other common damage agents with examples in the lab and in the field, in rural and urban environments.
3. Describe integrated pest management techniques available for common forest pests of the Great Lakes region.
4. Apply forest health monitoring techniques and evaluate results of data collected in class.
5. Learn critical thinking skills as they relate to forest health and forest entomology.

### RESOURCES FOR THIS CLASS:

#### **Required books:**

1. *Managing Insects and Mites on Woody Plants: an IPM approach.* Davidson & Raupp (purchase only)
2. *Forest Entomology lab manual* (provided during class)

#### **Web resources:**

Wisconsin DNR Forest Health: <https://dnr.wi.gov/topic/ForestHealth/>

Forestry Images, <http://www.forestryimages.org/>

North American Insects and Spiders, <https://www.cirrusimage.com/>

University of Minnesota Extension, <https://apps.extension.umn.edu/garden/diagnose/insect/>

Insect ID, <http://www.insectidentification.org/>

BugGuide.net, <http://bugguide.net/node/view/15740>

More insect ID with picture key, [http://www.discoverlife.org/mp/20q?guide=Insect\\_orders](http://www.discoverlife.org/mp/20q?guide=Insect_orders)

The Bugwood Network, <http://www.bugwood.org/index.cfm>

### EXPECTATIONS:

I will provide you with the most up-to-date information and resources on forest health, forest entomology, and related issues that I can. I will be available in and out of class to answer questions and help you learn. I want you all to succeed and feel confident in applying the material we cover during class.

My expectations of you include professionalism, respect for your instructor and classmates, willingness (and even excitement!) to learn new material, inquiry, open-mindedness and academic integrity. Although I understand that all of you may not want to be professional entomologists, I will present the material relevant for professional foresters and appreciate your willingness to understand the importance of insects in forestry.

### ATTENDANCE:

Your attendance in class is expected and essential for success in this course. I also understand that sometimes it is necessary to miss class, so please see me if this happens and I will be happy to go over any missed material with you. Lab quizzes may only be made up with a valid, documented excuse; attendance in a different lab section than the one you signed up for is ok. Most of the lecture exam material will be taken directly from what I talk about in class, so it will be very advantageous for you to attend. You are responsible for any class material that you miss. Most importantly, a positive attitude and hard work will facilitate you achieving the grade you want. *Make-up exams will only be given when a valid, documented excuse is presented to the instructor (or by prior arrangement). Arrangements for a make-up exam must be made prior to the exam period or no later than 24 hours after the missed exam.*

## GRADING:

Grades for this class will be based on (2) exams (15% each), (3) lab quizzes (10% each), (3) professional email responses (5% each), and your insect collection (25%). The lecture exams will mainly be comprised of short essays where students will apply information learned during lecture and lab. Lab quizzes will be taken during lab, and students must be present during lab to take the quizzes.

*\*\*\*Posting instructor-created course material onto course-sharing websites directly violates the instructor's copyright on his/her academic materials: permission to post instructor-created material on any such site is unequivocally denied\*\*\**

<u>Evaluation type</u>	<u>% of grade</u>	<u>Mean Score</u>	<u>Letter Grade</u>	<u>Mean Score</u>	<u>Letter Grade</u>
Exam 1	15%	100-93	A	79-78	C+
Exam 2	15%	92-90	A-	77-73	C
Lab quizzes (3)	30%	89-88	B+	72-70	C-
Insect collection	25%	87-83	B	69-68	D+
Professional emails	15%	82-80	B-	67-60	D
				<60	F

## CANVAS:

We will be using the new Course Management System, Canvas. Canvas login, support information, and training opportunities are available at [www.uwsp.edu/canvas](http://www.uwsp.edu/canvas). Lecture powerpoints, readings, grades, and all other course information will be posted on our course Canvas page. We will not be using D2L.

## Professional Email Responses:

Throughout your career you likely will receive emails from the public, with questions about tree health. As part of this forest entomology class, you will be required to respond, in a professional manner as an expert in the field, to three public email inquiries related to tree health throughout the semester. Each email response is worth 20 points; 15 points for accuracy of your response, and 5 points for timeliness of your reply (within 2 business days). One point will also be subtracted for each error, including grammatical errors or unprofessional word or phrase choices. You should always address the author by the way they sign their email. Professional email responses are worth 15% of your final course grade.

## Fall 2019 (TENTATIVE) LAB SCHEDULE Mondays 10-11:50AM (Lab 1); 12-1:50PM (Lab 2) ALL INDOOR LABS HELD IN TNR 360

<u>LAB</u>	<u>TOPIC</u>
Sept 9	OUTDOOR LAB: Insect collecting & preservation
16	OUTDOOR LAB: FOREST HEALTH MONITORING
23	OUTDOOR LAB: FOREST HEALTH MONITORING
30	Insect orders part 1 (gradual and incomplete metamorphosis)
Oct 7	Insect orders part 2 (complete metamorphosis)
14	<b>LAB QUIZ 1</b>
21	Defoliators
28	Bark & wood-boring insects
Nov 4	<b>LAB QUIZ 2</b>
11	Natural enemies
18	OPEN LAB- WORK ON COLLECTIONS
25	Sapsucking insects
Dec 2	<b>INSECT COLLECTIONS DUE AT BEGINNING OF LAB;</b> Invasive insect lab
9	<b>LAB QUIZ 3</b>

**FALL 2019 (TENTATIVE) LECTURE SCHEDULE**  
**Tuesdays & Thursdays 10:00 - 10:50am; TNR 120**

<u>DATE</u>	<u>CLASS TOPICS*</u>	<u>REQUIRED READING ASSIGNMENTS**</u>
Week 1	Class introduction; Forest health and the role of insects	Haack & Byler 1993 Raffa et al. 2009
Week 2	Forest health contd.	
Week 3	Insect classification & diversity; Insect metamorphosis	
Week 4	<b>No class Sept 24 (professional meeting);</b> Host selection	Baldwin et al. 2006 Erelli et al. 1998
Week 5	<i>Professional Email #1</i> Host selection contd; Insects & drought	Mattson & Haack 1987
Week 6	Defoliators	Stoyenoff et al. 1994
Week 7	Defoliators contd;	
Week 8	<i>Professional Email #2</i> Bark & wood-boring insects; Bark beetles & climate change	Bentz et al. 2010
Week 9	<b>Exam 1 on Oct 29 during class</b> Gall-makers Seed and cone insects	
Week 10	Sapsucking insects	
Week 11	Root & terminal insects	Hunter 2001
Week 12	Exotic insects & forest impacts	Lovett et al. 2006
Week 13	Insects & climate change <b>NO CLASS NOV 28- THANKSGIVING</b>	Bale et al. 2002 Ayres and Lombardero 2000 Logan et al. 2003
Week 14	<i>Professional Email #3</i> Insects & climate change cont'd	
Week 15	Integrated Pest Management (IPM) and putting everything together	
	<b>FINAL EXAM DUE</b> <b>Wednesday, December 18 by 2:30pm</b>	

\*Lecture topics and readings may change, and will be updated weekly during class times

\*\*Readings can be found in Canvas, linked in class powerpoints, and as hard copies outside my office (TNR 363)

## **UWSP COMMUNITY RIGHTS AND RESPONSIBILITIES**

UWSP values a safe, honest, and respectful learning environment. To ensure that each student has the opportunity to succeed, the University has developed a set of expectations for all students and instructors called the *Rights and Responsibilities* document, which can be found at <http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx>

Academic integrity is essential to the University mission and success in life. Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated. Do not do it! The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. See "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities* document (<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>).

Trust between students and instructors is of paramount importance in academic settings. Academic dishonesty will not be tolerated in the classroom (e.g., cheating on exams) or in research efforts (e.g., online assignments). Students found cheating will be punished to the fullest extent that University policy permits.

## **AMERICANS WITH DISABILITIES ACT**

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations to students with disabilities. More information about UWSP's policies can be found at <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

Students with disabilities requiring accommodations should contact the Disability and Assistive Technology Center (Rm. 609, Learning Resource Center; (715)346-3365) during the first three weeks of the semester. If an accommodation is granted by the Disability and Assistive Technology Center, an accommodations request form should be provided to and discussed with the instructor. I ask that any accommodations request be brought to my attention at least one week prior to the need for accommodation, or as soon as it is practical to do so. I will be happy to assist in any way that I can.

## **CELL PHONE AND OTHER ELECTRONICS POLICY**

The use of cell phones or other related and similar devices is not permitted during class. Cell phones and other electronic devices should be turned off before class begins. It is disruptive to students and instructors to have students using phones or to hear phones ringing (including ringers on vibrate mode). Students found using such devices may be asked to turn them off, and/or leave class. If you are expecting a call that cannot wait until after class, please make sure to sit close to the door and let the instructor know before class that you may have to leave during class time. If you would like to use a laptop, tablet or similar device for taking notes, please ask the instructor before class begins. You will be asked to turn off your device if found to be distracting others or if using the device for something other than taking notes.

## **EMERGENCY PROCEDURES**

- In the event of a medical emergency call 911 or use a Red Emergency Phone on outside of TNR 153. Offer assistance if trained and willing to do so. Guide Emergency Responders to victim.
- In the event of a tornado warning, the rest rooms across the hall from TNR 120 serve as the closest tornado shelter. Exit our room and go across the hallway to enter the rest rooms.
- In the event of a fire alarm, evacuate the building in a calm manner. Meet on the north side of the TNR building, in parking lot D. Notify instructor or emergency command personnel of any missing individuals.
- Active Shooter – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Follow instructions of Emergency Responders.
- See UW-Stevens Point Emergency Management Plan at [www.uwsp.edu/rmgt](http://www.uwsp.edu/rmgt) for details on all emergency response at UW-Stevens Point.