

# ENT 314: MANAGEMENT OF INSECT PESTS OF ORNAMENTALS

Spring 2022 | Location: 15 Ag Sciences & Industries Building | Prerequisite: Ent 313

## Course Instructor

### Section 201: Friday (9:05 to 11:00 am)

Sahil Pawar

[svp6108@psu.edu](mailto:svp6108@psu.edu) | Office: 545 ASI | Mailbox can be found in 503 ASI (Mailroom)

## Supervising Instructor

Dr. Kelli Hoover

Department of Entomology | [kxh25@psu.edu](mailto:kxh25@psu.edu) | 517 ASI Building

We will be sending emails to the class via Canvas, so please make sure you can see these. To let us know anything pertinent to the course, feel free to email us, speak with us after class, or schedule office hours. To work best with everyone's schedules and with COVID restrictions, all office hours are by appointment and over Zoom.

**You will need a laptop, tablet, or other device with internet access for this course.** If you need help with this, please let us know prior to the first day of class.

## Course Description and Objectives

Entomology 314 is designed as an introduction to arthropod pests of ornamental plants, with emphasis on invasive species. During this 7-week course, we will learn to:

- Identify important ornamental pests and their natural enemies by their appearance and the type of damage they cause
- Recommend IPM control plans based on hypothetical pest control situations and real world examples
- Communicate our findings in both specialist and layman's terms
- Use online resources effectively and critically evaluate their trustworthiness to complete projects

## Recommended/Supplemental Text

*Insects that Feed on Trees and Shrubs*, 2<sup>nd</sup> Edition. Warren Johnson and Howard Lyon. This text is an excellent reference for developing landscape managers, though it is not required for this class. Insect pest fact sheets that will be of great help in completing assignments for this class can be found at: <http://ento.psu.edu/extension/factsheets>

## Course format

The course covers the most important local pests of ornamentals, distributed into categories according to types of plant damage. Some case studies of important invasive species will be presented in lecture, while others will be introduced through in-class assignments. Due to the Coronavirus outbreak, class will be held over Zoom during class time from Friday, March 19<sup>th</sup> to Friday, April 30<sup>th</sup>. **Zoom lectures will be recorded** to allow for later viewing in case of any technical difficulties and review.

## **Assignments**

### **Weekly Quizzes**

Short, weekly quizzes will be given that cover material directly from case studies and the in-class assignment from the week before. All question formats may be used including true/false, multiple choice, fill in the blank, matching and essay. You may also be asked to identify slides, images or specimens and resolve hypothetical pest control situations. We are hoping to find out what information stuck with you from class, so please do not use your notes or copies of the online lectures for the quizzes. Quizzes will be available through Canvas and will be open for a week.

### **In-class Assignments**

There will be weekly, in-class assignments asking you to identify and research other pests that cause similar damage to the case study described in lecture, allowing you to become familiar with a wider range of pests. These assignments can be found on Canvas and if you desire, can be completed with other classmates of your choice using any resources, such as textbooks, fact sheets, websites, etc. If you are not comfortable evaluating sources for trustworthiness, please let one of the instructors know, and we will be glad to help you. Insect pest fact sheets that contain much of the information you will need can be found at: <http://ento.psu.edu/extension/factsheets> and through the Extension services of other universities. Drop boxes for assignments will be on Canvas and open for a week.

### **Virtual Pest Walk**

On the last day of class, there will be a virtual field trip to identify and discuss insect pests on campus. The instructors will record a walk around campus showing and describing pest issues found right here at Penn State, allowing you to see what these issues look like in the field. You will then be asked to fill out a worksheet based on this recording with questions about the pests found during the walk.

### **Homeowner Letter**

You will be given a mock letter from a homeowner, mimicking those often received by professional Extension entomologists, which describes an issue they are having with one of their ornamental plants. Please write a response letter for the homeowner with information about what pest you believe caused the damage such as its background, lifecycle, distribution, and control methods.

### **Participation**

We hope to see engagement, intellectual curiosity, courage, and respect for classmates during this class, allowing us all to learn about the fascinating variety of insect pests on ornamental plants. We will be meeting through Zoom and are planning for you to attend synchronously with the rest of the class so that you can actively learn together and ask us questions when something is unclear.

<b>ENT 314 Schedule</b>			
Date:	Case Study/Type of Damage	Open on Canvas	Due
3/18/2022	Introduction to Course – IPM & Natural enemies	Quiz 1 Homeowner Letter	
3/25/2022	Hemlock woolly adelgid/ Distortion	Quiz 2 Assignment 1	Quiz 1
4/01/2022	Spotted lanternfly / Discoloration	Quiz 3 Assignment 2	Quiz 2 Assignment 1
4/08/2022	Gypsy moth / Defoliation	Quiz 4 Assignment 3	Quiz 3 Assignment 2
4/15/2022	Emerald ash borer / Wood borers	Quiz 5 Assignment 4	Quiz 4 Assignment 3
4/22/2022	Pests of Greenhouses	Quiz 6 Assignment 5	Quiz 5 Assignment 4
4/29/2022	Pest walk	Pest Walk Worksheet	Quiz 6 Assignment 5 Homeowner Letter
5/6/2022	No Class – Have a great summer!		Pest Walk Worksheet

### Grading Scale:

A	93-100%		
A-	90-92		
B+	87-89		
B	83-86		
B-	80-82		
C+	76-79		
C	70-75		
D	60-69		
F	< 60		
		<b>Assignment</b>	<b>Points</b>
		<b>Percentage of grade</b>	
		Quizzes (6 worth 10 pts each)	60
		In class assignments	50
		Pest walk work sheet	10
		Homeowner letter	10
		Participation	10
		<b>TOTAL</b>	<b>140</b>
			<b>42.5%</b>
			<b>35.0%</b>
			<b>7.5%</b>
			<b>7.5%</b>
			<b>7.5%</b>
			<b>100%</b>

### Extra Credit

We will offer extra credit upon request. It will consist of an assignment agreed upon between the instructor and yourself and will likely consist of a higher-level literature review and a written report. The goal of EC projects will be analyzing recent research in the field of ornamental pest management, helping us develop future lecture material.

### Make-up policy

In case you are unable to attend class, lectures will be recorded and placed online for later viewing. **Please let us know as soon as possible if you are unable to make class.** If you miss a quiz or assignment, please contact your course instructor to reopen quizzes and assignment drop boxes for make-up work within one week of the original due date. If this is your first late quiz or assignment, you can receive full credit. After this, your highest possible score will drop 10% for each piece of late work.

**Academic Integrity**

Academic integrity, as defined by University Faculty Senate Policy 49-20, is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

**Disability Access**

The Pennsylvania State University encourages qualified persons with disabilities to participate in these programs and activities and is committed to the policy that all people shall have equal access to programs, facilities, and admissions without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. If you anticipate needing any type of accommodation in this course or have questions about physical access, please tell the instructor as soon as possible.

**Educational Equity**

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the Report Bias webpage: <http://equity.psu.edu/reportbias/>

**Counseling and Psychological Services**

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation. If you need help, please contact the Counseling and Psychological Services at University Park (CAPS) through their website (<http://studentaffairs.psu.edu/counseling/>) or by calling 814-863-0395