

SPRING 2022

ENT 317: Introduction to entomology and management of insect pests of cool- and warm- season turfgrass

Instructor: Dr. Ben McGraw bam53@psu.edu
243 ASI Building; 814-865-1138

Teaching Assistants:

Garrett Price (gyp5046@psu.edu)

Audrey Simard (ajs8275@psu.edu)

Overview: This course will introduce students to a thorough understanding of insects and their relatives, IPM, control strategies, and specific pests of cool- and warm-season turfgrasses. Students will be provided with a fundamental understanding of the ecology, life history, and development of IPM plans for the key surface and subsurface pests of cool- and warm-season turfgrass. The course will provide students the opportunity to review EPA registered turfgrass insecticides and respective labels, and the effects of turfgrass insecticides on non-target organisms. Students will be invited to share their experiences with pest problems and methods they deployed to manage turfgrass insect species in the turfgrass environment.

Students will be evaluated by the use of class assignments, quizzes, exams and a final exam.

Course Schedule for Lectures and Location

Lecture Time: 9:05 AM – 10:20 AM

Lectures: Tu, Th

Lecture Location: 107 Forest Resources Building

CANVAS Course Site:

Important class information, class notes, online quizzes and assignments will be available on the course's CANVAS site. Online assignments: You get one attempt per assignment. Refer to course schedule below for closing dates. The instructor encourages students to check the Calendar and e mail prior to each course lecture.

Course Materials – Course Textbooks

NO TEXTBOOKS ARE REQUIRED. However, if you are going to work in the Green Industry, I highly recommend the following:

- Vittum, P. J. (2020) **Turfgrass Insects of United States and Canada.** Cornell University Press.
- Potter, D.A. (1998) **Destructive Turfgrass Insects: Biology, Diagnosis and Control.** John Wiley and Son, Hoboken, NY.

Horticulture and Landscape Students:

- Cranshaw, W. (2004) **Garden insects of North America: the ultimate guide to backyard bugs.** Princeton Univ Press.

Notes on the Schedule of Classes

NOTES:

- The schedule is subject to change based on numerous unforeseen factors. If the schedule requires adjusting, you will be notified through CANVAS(**you need to be checking your class site and your student e mail**).
- Several in-class labs are set up to familiarize the student with pesticide labels, biological control of insect pests, and some hands-on identification or sampling. Check your email for times that the class may be divided into smaller groups and the respective meeting times.

Lesson Highlights:

Course notes (fill-in-the-blank style) and copies of lectures will be available on the course’s CANVAS Web Site. The course notes will cover some of the key points for specific topics that will be covered in course lectures, and include significant information/concepts which may appear on future quizzes and/or exams. Highlights will assist you in preparing for exams and quizzes. **Print them out prior to class!**

Grading System and Total Points:

For each week of study (and to receive Penn State credit) each student will:

1. Review messages placed on the General Message Board (arrives through e mail)
2. Complete all online assignments- quizzes and labs
3. Hand in assignments on time
4. Complete three semester exams (includes Final Exam)
5. Attendance and participation is required throughout the course. S

Breakdown of grades:

Assignment	#	% of Total
Online Quizzes (2 lowest will be dropped)	13	20%
In-class labs	4	32%
Visual Pest Identification exam	1	6%
Exams (in class)	2	28%
Final Exam =	1	14%

Online Quizzes:

1. These are **TIMED quizzes** and you only have **ONE opportunity** to take each quiz. DO NOT start a quiz until you are prepared and ready!
2. Please see the course schedule for due dates. **Quizzes open immediately after class, and close on either Thursday night (for Tuesday lectures) or Sunday**

night (Thursday lecture) at 11:59 PM EST. See course schedule and calendar for quiz closing dates.

Attendance and Participation:

Attendance and participation is required throughout the course.

Assignments:

There will be in-class "lab" assignments (3). Refer to the course schedule for locations and closing dates.

Exams:

All exams are taken during the class time, including 2 semester exams (combined 28% of total grade), and the Final Exam (14% of total grade). A pest ID exam will be given to test your ability to recognize the insects we learn about this semester. That exam is worth 6% of your grade.

Letter Grade Percent Total Points:

A	93%-100%	A-	90%-92.9%	B+	87%-89.9%
B	83%-86.9%	B-	80%-82.9%	C+	77%-79.9%
C	70%-76.9%	D	60%-69.0%	F	< 60

SPECIAL NOTE:

***No makeup quizzes or exams will be given except for students who miss classes for legitimate but unavoidable reasons.** Legitimate, unavoidable reasons include illness, injury, family emergency, or religious observance. If an evaluative event will be missed due to an unavoidable absence, the student should contact the instructor as soon as the unavoidable absence is known to discuss ways to make up the work or exam.

Please refer to University Senate Policy 42-27 on Class Attendance at <http://senate.psu.edu/policies/index.html> for complete details.

****Assignments are due on the date identified by the instructor.**

Late Assignments will not be accepted. Refer to University Senate Policy 42-27 for additional details.

Please refer to the University Grading Policy for Undergraduate Courses for additional information about University grading policies

Penn State's University Faculty Senate Policy 49-20 Academic Integrity :

Definition and expectations: Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.

Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

To protect the rights and maintain the trust of honest students and support appropriate behavior, faculty and administrators should regularly communicate high standards of integrity and reinforce them by taking reasonable steps to anticipate and deter acts of dishonesty in all assignments (Senate Policy 44-40: Proctoring of Examinations). At the beginning of each course, it is the responsibility of the instructor to provide students with a statement clarifying the application of University and College academic integrity policies to that course.

Committee on Academic Integrity: Each College Dean (or Campus Executive Officer as determined by College policy) shall appoint a Committee on Academic Integrity made up of faculty, students, and academic administrators with faculty being the majority. This committee shall:

- Promote expectations for academic integrity consistent with the definition in this policy.
- Ensure fairness and consistency in processes and outcomes. To ensure University-wide consistency, College Committees will work with the Office of Judicial Affairs and the Office of the Provost of the University to develop procedures for handling and sanctioning dishonesty infractions.
- Review and settle all contested cases in which academic sanctions are applied. If necessary, further disciplinary action will be taken by Judicial Affairs.
- Record all cases of academic dishonesty within a college and report them to Judicial Affairs.

Please visit: <http://academicintegrity.cas.psu.edu> (Links to an external site.)[Links to an external site.](#) (Links to an external site.)

Home Page for Penn State's Office of Disability Services:

URL at: <http://www.equity.psu.edu/ods/> (Links to an external site.)[Links to an external site.](#) (Links to an external site.)

Cell Phones: :

Please turn off your cell phones prior to the start of class !!!

Course Disclaimer:

Please note that the specifics of this Course Syllabus are subject to change, and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes in class or via Canvas.

Course Summary:

Date	Details
Sun Jan 16, 2022	Assignment Quiz 1: Insect basics, Insects and their Relatives
Thu Jan 20, 2022	Assignment Quiz 2: Growth and Development/ Lifecycles
Sun Jan 23, 2022	Assignment Quiz 3: Insects from the Outside

Date	Details
Thu Jan 27, 2022	Assignment Structure and Function Lab
Thu Feb 3, 2022	Assignment Quiz 4: Insects from the inside
Sun Feb 6, 2022	Assignment Quiz 5: Insect Behavior
Thu Feb 10, 2022	Assignment EXAM 1
Thu Feb 17, 2022	Assignment Quiz 6: IPM
Sun Feb 20, 2022	Assignment Quiz 7: Leaf Feeders
Sun Feb 27, 2022	Assignment Quiz 8: Crown Pests
Sun Mar 6, 2022	Assignment Quiz 9: Root Feeders
Thu Mar 17, 2022	Assignment Quiz 10: Ticks and Earthworms
Tue Mar 22, 2022	Assignment EXAM 2
Thu Mar 24, 2022	Assignment Pest Identification Challenge
Thu Mar 31, 2022	Assignment Insecticide Label Lab
	Assignment Quiz 11: Insecticides and Modes of Action
Tue Apr 12, 2022	Assignment Biological Control Lab: Predator-Prey dynamics
Thu Apr 14, 2022	Assignment Cultural Control Lab: White Grubs vs Aerifiers
Sun Apr 17, 2022	Assignment Quiz 12: Biological, Genetic, Cultural Controls
Thu Apr 28, 2022	Assignment Quiz 13: Social Insects and Ants

