



ENVS*3140 - Management of Turfgrass Diseases

Fall 2026 Course Outline

Section: 01

Credits: 0.50

Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

Calendar Description

In this course ecology of turfgrass diseases and cultural methods of management will be emphasized, in addition to field recognition and microscopic diagnosis of diseases. Advances in biological and chemical control measures and their impact on turfgrass ecosystems and surrounding environments will also be discussed.

Prerequisite(s): HORT*2450

Restriction(s): DTM*3200

Department(s): School of Environmental Sciences

Course Description

ENVS*3140 Turfgrass Diseases F(2-2) [0.50]. The ecology of turfgrass diseases and cultural methods of management will be emphasized, in addition to field recognition and microscopic diagnosis of diseases. Advances in biological and chemical control measures, and their impact on turfgrass ecosystems and surrounding environments will also be discussed. This course will interest students who plan a career in turfgrass management, but will also be useful to those interested in maintaining healthy home lawns.

Lecture Schedule

TuTh 12:30pm-1:20pm in GRHM*3308 (9/10 to 12/22)

Lab / Seminar Sections

Day	Time	Location
Tue	2:30-4:20	Graham Hall 3309

Instructor Information

Tom Hsiang

Email: thsiang@uoguelph.ca

Teaching Assistant

TBA

Cost of Textbooks and Learning Resources

There are no required text books for this course, but this is recommended:

Textbook / Learning Resource	Required / Recommended	Cost
OMAFRA Publication 845 Integrated Pest Management/Protection Guide for Turfgrass https://www.ontario.ca/files/2023-06/omafra-integrated-pest-management-for-turf-pub-845-en.pdf	Recommended (disease section)	Free

Course Learning Outcomes

1. to describe major groups of cool season (northern temperate zone) turf diseases
2. to properly identify causal agents in turf disease samples using a diagnostic manual and a microscope
3. to recognise the effects of environmental conditions on turf diseases
4. to recognise the impact of turf disease management practices on the environment
5. to differentiate between biotic and abiotic turf disease symptoms
6. to use cultural, biological and chemical techniques to minimise severity of turf diseases
7. to demonstrate the ability to find and critically evaluate recent primary research articles on a turfgrass pathology issue, and to write a literature review integrating the information using appropriate scientific language

Teaching and Learning Activities

Lecture Content:

For the first lecture (Sept 10, Thursday, 12:30), meet in Graham Hall 3308, and then we'll walk around outside Bovey/Graham Hall. This material will be tested in the first Lab Quiz on Tuesday lab (Sep 15, Graham Hall 3309 at 2:30pm)

Introduction to Plant Pathology: disease triangle & cycles

Winter diseases: grey snow mold & pink snow mold

Spring Diseases: Fusarium patch, Leaf spots & melting out

Root diseases: necrotic ring spot, take-all patch, summer patch, fairy ring

Summer diseases: dollarspot, brown patch, anthracnose, pythium blight & root rot

Other diseases: red thread & yellow patch, powdery mildew & rust

Abiotic and miscellaneous diseases: slime molds, moss & algae, abiotic

Fungicides - toxicity, cost, types, regulation

Turf disease prediction

Turf disease research

Lab Content:

For the first lecture (Sept 10, Thursday, 12:30), meet in Graham Hall 3308, and then we'll walk around outside Bovey/Graham Hall. This material will be test in the first Lab Quiz on Tuesday lab (Sep 15, Graham Hall 3309 at 2:30pm)

Sep 15 LAB QUIZ (15 min), then Intro plant pathogens: nematodes, bacteria, fungi

Sep 22 LAB QUIZ (15 min), then Snow Mold Diseases

Sep 29 LAB QUIZ (15 min), then Spring Diseases (Fusarium Patch, Leaf spots, other leaf spots)

Oct 6 LAB QUIZ (15 min), then Root Disease (NRS, TAP, SP, and Fairy Ring)

Oct 13 NO LAB because of Thanksgiving break

Oct 20 LAB QUIZ (15 min), then Summer Diseases I (Dollar spot, Brown Patch, other Rhizoc, Rust)



Oct 27 LAB QUIZ (15 min), then Summer Diseases 2 (Anthrac, Pythium, Powdery Mildew, Red Thread)

Nov 03 Midterm

Nov 10 LAB QUIZ (15 min) then other diseases (Moss & algae, Black layer, Dog patch, damping-off, cool season dieback)

Nov 17 LAB QUIZ (15 min), then Newer Diseases (Gray Leaf Spot, Rapid Blight, Bacterial Wilt)

Nov 24 LAB QUIZ (15 min), then practice identifying unknowns on slides or live samples

Dec 1 LAB QUIZ (45 min, double weight) identifying unknowns using KEY from last lab

Dec 3 (Tuesday schedule because of Thanksgiving break). This lab will be review for Final Exam

Assessment Breakdown

By the 40th class day, you will have approximately 30% of your marks graded and returned to you (six lab quizzes worth 15%, and term paper worth 15%)

Description	Weighting (%)	Due Date
Lab Quizzes	25	All weeks at lab start
Midterm Exam	25	Nov 3, 2:30-4:20 (Lab 8)
Term Paper	15	Oct 2, 5pm topic due Oct 30, 5pm term paper due
Final Exam	35	TBA

Assessment Details

Quizzes

Lab Quizzes

25

Lab quizzes will cover the material from the previous lab, and will occur the week following the lab unless a holiday or other events occur.

Course Learning Outcomes Assessed: 1, 2

Exam

Midterm Exam

25

The midterm exam will occur in a lab slot to allow more time. It will cover material from lectures and supporting information from labs and field trips. The questions will be mostly short answer with only a few true/false ones.

Course Learning Outcomes Assessed: 3, 4

Paper

Term Paper

15

The term paper involves a 1000-2000 word review of a turfgrass disease, involving five research articles, on a specific turfgrass disease.

Late penalty for term paper (topic and paper itself) is 10% per day

Course Learning Outcomes Assessed: 7

Exam

Final Exam

35

The final exam will be comprehensive covering all the material from the start of the class, but with greater emphasis on material since the midterm. The format of questions will be similar to those on midterm.

Course Learning Outcomes Assessed: 5, 6

Last Day to Drop Course

The final day to drop Fall 2026 courses without academic penalty is the last day of classes: December 04



After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

Standard Statements for Undergraduate Courses

Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to make a booking at least 10 business days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas>)

Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all undergraduate students except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

Recording of Materials

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)