# Course Outline Form: Fall 2017

## General Information

**Course Code:** ENVS\*3140

**Course Title:** Management of Turfgrass Diseases

**Course 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.

**Credit Weight:** 0.5

**Academic Department (or campus):** School of Environmental Sciences

**Campus:** Guelph

**Semester Offering:** F17

**Class Schedule and Location:**

Lectures: Graham Hall 3308, Mondays and Wednesdays, 12:30-1:20 p.m.

Labs: Graham Hall 3309, Thursdays, 2:30-4:20 p.m.

## Instructor Information

Instructor Name: Dr. Tom Hsiang

Instructor Email: thsiang@uoguelph.ca

Instructors Phone Ext.: 52753

Office location and office hours: Bovey 3227, appointments by arrangement.

Instructor Name: Dr. Coralie Sopher

Instructor Email: csopher@uoguelph.ca

Instructors Phone Ext.: 54912

Office location and office hours: Bovey 3116, office hours by appointment.

## GTA Information

GTA Name: TBA

GTA Email: TBA

GTA office location and office hours: TBA

## Course Content

## This course covers the biology and management of turfgrass diseases and disorders emphasizing their ecology and cultural, biological and chemical means of control. Laboratory identification and field recognition of common turfgrass diseases are discussed, along with the impact of control methods on the environment. Recent research on turfgrass diseases is also presented.

### Specific 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 recognize the effects of environmental conditions on turf diseases;
4. To recognize the impact of turf disease management practices on the environment;
5. To differentiate between biotic and abiotic disease symptoms; and
6. To use cultural, biological and chemical techniques to minimize severity of turfgrass 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

### Lecture Content:

* Introduction to Plant Pathology: disease triangle and cycles
* Winter diseases: grey snow mold and pink snow mold
* Spring Diseases: Fusarium patch, Leaf spots and melting out
* Root diseases: necrotic ring spot, take-all patch, summer patch, fairy ring
* Summer diseases: dollarspot, brown patch, anthracnose, pythium blight and root rot
* Other diseases: red thread and yellow patch, powdery mildew and rust
* Abiotic and miscellaneous diseases: slime molds, moss and algae, abiotic
* Fungicides - toxicity, cost, types, regulation
* Turf disease prediction
* Turf disease research

### Labs:

* First Thursday lab, meet at GTI at 2:45 p.m. If heavy rain, meet in lab (GRHM 3309) at 2:30 p.m.
* Lab quiz (15 min), then Introduction to plant pathogens: nematodes, bacteria, fungi
* Lab quiz (15 min), then Snow Mold Diseases
* Lab quiz (15 min), then Spring Diseases (Fusarium Patch, Leaf spots, other leaf spots)
* Lab quiz (15 min), then Root Diseases (NRS, TAP, SP, other)
* Lab quiz (15 min), then Summer Diseases (Dollar spot, Fairy Ring)
* Lab quiz (15 min), then Summer Diseases I (brown patch, anthracnose, pythium)
* Other diseases (Powdery mildew, Red thread, Yellow patch, Waitea Patch, Rust)
* Lab quiz (15 min), then Other diseases (Moss and algae, Black layer, Dog patch, Seed rot and damping off, Cool season dieback)
* Lab quiz (15 min), then New Diseases: Gray Leaf Spot, Rapid Blight, Bacterial Wilt, and then Using Disease Key (practice identifying unknowns on slides or live samples)
* Lab quiz (45 min) on identifying unknowns

### Seminars: None

### Course Assignments and Tests:

| **Assignment or Test** | **Due Date** | **Contribution to Final Mark (%)** | **Learning Outcomes Assessed** |
| --- | --- | --- | --- |
| Lab Quizzes | Weeks 2-11 in lab | 24% | 1,2 |
| Midterm Exam | October 19, in lab | 21% | 3,4 |
| Term Paper | October 2, 5 p.m. topic dueOctober 30, 5 p.m. paper due | 20% | 7 |
| Final Exam | December 13, 2:30-4:30 p.m. | 35% | 5,6 |

### Final examination date and time: December 13, 2:30-4:30 p.m.

### Final exam weighting: 35%

## Course Resources

### Required Texts: None

### Recommended Texts: OMAFRA 845, Integrated Pest Management for Turf (downloadable)

### Lab Manual: Available in class

### Other Resources:

### Field Trips: None

### Additional Costs:

## Course Policies

### Grading Policies

Please advise the instructor of examination conflicts as soon as possible. If you have an illness or other problem, please see your program counsellor and ask them to issue a notice to instructors. There are no make-up opportunities for lab quizzes or the midterm, but academic consideration (such as transfer of marks to the final exam) may be given with appropriate supporting documentation.

**Course Policy on Group Work:**

Group work for marked assignments is not permitted.

### Course Policy regarding use of electronic devices and recording of lectures:

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

## University Policies

### Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml).

### Academic Misconduct:

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.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml).

### Accessibility:

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or visit the [Student Accessibility Services website (http://www.uoguelph.ca/csd/)](http://www.uoguelph.ca/csd/).

### Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](https://courseeval.uoguelph.ca/) **for more information.**

### Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III (Schedule of Dates) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml).

## Additional Course Information

**Course Material:** The instructor will post announcements, hand-outs, and slides from lectures and other material that will enhance your understanding of the course content on CourseLink. All course materials made available through CourseLink and all items covered in class are considered required, unless the instructor explicitly indicates otherwise. Please check the CourseLink site often.

**Midterm Exam:** The Midterm exam is worth 21% of your final mark. It will take place during the lab period on October 19. The Midterm exam will cover all lecture and lab material (including guest lectures) up to and including the October 18 lecture. Midterm exams will not be returned, however they may be viewed and discussed by appointment with Dr. Sopher.

**Final Exam:** The Final Exam is worth 35% of your final mark. It will take place on December 13, 2:30-4:30 p.m., location to be announced. The Final Exam will cover all course material.