



# ENVS\*2040 Plant Health and the Environment

Winter 2024

Section(s): 01

School of Environmental Sciences

Credit Weight: 0.50

Version 1.00 - January 08, 2024

---

## 1 Course Details

### 1.1 Calendar Description

This is an interdisciplinary course on the nature and importance of diseases, insects and abiotic stresses on plant productivity and quality. A case history approach will be used to illustrate the biology of plant pests, the principles of pest population management, and related topics.

**Pre-Requisites:** BIOL\*1040 or (2 of BIOL\*1050, BIOL\*1070, BIOL\*1080, BIOL\*1090)

**Equates:** ENVB\*2040

### 1.2 Course Description

Plant Health and the Environment provides an overview on how plants are important for humans and the environment. It also focuses on how different pests, diseases and environmental conditions can cause major problems not only for the environment per se, but also for our lives and society. A diverse selection of local and global plant health problems and the challenges associated with their control and management are covered using a case study approach.

### 1.3 Timetable

Lectures: Tuesdays and Thursdays 1:00 PM – 02:20 PM ET. Room 100 Alexander Hall

Live-streaming and recording of lectures will not be used in this course.

### 1.4 Final Exam

There will not be a final exam in this course.

---

## 2 Instructional Support

### 2.1 Instructional Support Team

**Instructor:** Coralie Sopher  
**Email:** coralie.sopher@uoguelph.ca  
**Office Hours:** Email is the best way to contact the instructor and answers are typically provided within 72h during regular work days/hours. All electronic communications should be done using your U of G email address. Please include "ENVS\*2040" in the subject line. Online or in-person appointments can be arranged. An online Discussion forum is set up in CourseLink for you to ask your instructor/TAs questions.

### 2.2 Teaching Assistants

**Teaching Assistant (GTA):** Mathew Wake  
**Email:** mwake@uoguelph.ca  
**Office Hours:** Please contact Mathew via email to address any questions or concerns with an assignment if he has been assigned to mark that. Responses are typically answered within 72h during regular work days/hours.

**Teaching Assistant (GTA):** Dilrukshi Kombala Liyanage  
**Email:** dkombala@uoguelph.ca  
**Office Hours:** Please contact Dilrukshi via email to address any questions or concerns with an assignment if she has been assigned to mark that. Responses are typically answered within 72h during regular work days/hours.

**Teaching Assistant (GTA):** Ajwal Dsouza  
**Email:** ajwal@uoguelph.ca  
**Office Hours:** Please contact Ajwal via email to address any questions or concerns with an assignment if he has been assigned to mark that. Responses are typically answered within 72h during regular work days/hours.

## 3 Learning Resources

### 3.1 Additional Resources

#### CourseLink (Website)

<https://courselink.uoguelph.ca>

The instructor will post announcements, select slides from lectures, readings, videos 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 (daily is recommended).

---

## 4 Learning Outcomes

### 4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. value the importance of plants for our society by analyzing the historical and current significance of pest, disease and environment-related issues.
  2. summarize life histories for selected disease pathogens and insect pests and evaluate their significance in horticultural, agricultural and forest environments.
  3. examine the challenges faced and methods used in the management of plant pathogens, pests and other plant-related problems.
  4. effectively communicate ideas and information in written, oral and graphic formats, while demonstrating an advanced understanding of the relevant scientific terminology.
  5. critically evaluate scientific literature regarding plant-related issues and effectively construct and communicate a personal fact-based critique.
- 

## 5 Teaching and Learning Activities

### 5.1 Lecture

**Topics:**

Lecture topics may include the following and are subject to change:

- General importance of plants including topics such as biofuels, climate change, wetlands, erosion effects and food security.
- Insects as pests including some basic entomology.
- Insect case studies such as the emerald ash borer, Swede midge, multicolored Asian lady beetle, and spotted winged Drosophila.
- An introduction to plant diseases and disease case studies such as crown gall, late blight, ergot of rye,

South American leaf blight, coffee rust and fairy ring.

- Pest and disease management including an introduction to integrated pest/disease management, biological control, genetically modified crops (plants with novel traits) and pesticide resistance.
- Abiotic disorders, weeds, nematodes and parasitic plants.
- Cannabis and associated pest/disease/abiotic challenges.

## 6 Assessments

### 6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Written critique topic/article submission	5
Written critique paper	20
Midterm examination I	25
Case study assignment	25
Midterm Examination II	25
Bonus Assignment	0
Total	100

### 6.2 Assessment Details

#### Written critique topic/article selection (5%)

**Date:** Mon, Jan 22, 5:00 PM

**Learning Outcome:** 1, 5

Instructions for the written critique paper are available under the Assessments tab in CourseLink. Available topics will become visible January 10 at 5 PM ET under a "Self-Enrollment" tab in the Navbar in CourseLink. Beginning at 5:00 PM ET January 11, you will be able to self-enroll in a topic, which will be on a first-come, first-served basis.

#### Written critique paper (20%)

**Date:** Mon, Feb 5, 5:00 PM, submitted to the Dropbox

**Learning Outcome:** 1, 2, 3, 4, 5

Instructions for the written critique paper are available under the Assessments tab in CourseLink.

### **Midterm Examination I (25%)**

**Date:** Thu, Feb 15, 1:00 PM, in-class, room 100 Alexander Hall

**Learning Outcome:** 1, 2, 3

Midterm I will take place during the regular lecture period and you will have 60 minutes to complete that. The Midterm exam will cover all materials presented in the course, including any guest lectures, up to and including the lecture on February 13. The Midterm exam is closed-book and must be completed by yourself, without any aids, for example, you are not allowed to use a calculator, phone, notes or the help of anyone else. The Midterm exam will not be returned and questions/answers will not be posted after they are completed. However, you can contact the instructor to view and/or discuss your exam.

### **Case study assignment (25%)**

**Date:** Mon, Mar 11, 5:00 PM, submitted to the Dropbox

**Learning Outcome:** 1, 2, 3, 4

Instructions for the case study assignment are available under the Assessments tab in CourseLink. Available topics will be displayed starting January 17 at 5:00 PM ET under the Self-Enrollment tab in the Navbar in CourseLink. Beginning at 5:00 PM ET January 18, you will be able to self-enroll in a topic, which will be on a first-come, first-served basis.

### **Midterm Examination II (25%)**

**Date:** Thu, Mar 28, 1:00 PM, in class, room 100 Alexander Hall

**Learning Outcome:** 1, 2, 3

Midterm II will take place during the regular lecture period and you will have 60 minutes to complete that.

Midterm II is not cumulative and will cover all materials presented in the course since Midterm I, including any guest lectures, up to and including the lecture on March 26. The Midterm exam is closed-book and must be completed by yourself, without any aids, for example, you are not allowed to use a calculator, phone, notes or the help of anyone else. The Midterm exam will not be returned and questions/answers will not be posted after they are completed. However, you can contact the instructor regarding your exam after you have received your final course grade. Your mark/assessment details for this exam can not be released prior to your final course grade being released.

### **Bonus marks (0%)**

**Due:** Mon, Apr 1, 5:00 PM, Submitted to the Dropbox

**Learning Outcome:** 1, 2, 3

You can obtain up to five bonus marks added to your final course grade by completing one of several options described under the Assessments tab in CourseLink. Please note that you can not receive a final grade above 100% in the course.

## **7 Course Statements**

## 7.1 Grading Policies

The written critique topic/article selection, written critique paper and case study assignments are to be submitted online via CourseLink to the Dropbox by 5:00 PM ET on their respective due dates.

Late assignments will be penalized 10% of the total marks available for the assignment, up to a maximum of four days, after which a grade of zero will be assigned. The Dropbox will be closed at 5:01 PM January 26, February 9 and March 15 for the written critique topic/article selection, written critique paper and case study assignment, respectively, and submissions will no longer be accepted after that time. If you do not submit your written critique topic/article selection to the Dropbox by 5:01 PM ET January 26, you will automatically be assigned to an available topic.

Extensions will be considered for medical reasons and other extenuating circumstances and must be discussed with the instructor at least several days in advance of a due date. Once the due date has passed, requests for extensions will not be granted, unless there are exceptional circumstances.

There are no alternate times for writing the Midterm exams. Requests for academic consideration because of an illness or compassionate circumstances must be made in writing to the instructor prior to a Midterm date (i.e., prior to February 15 and March 28). The normal accommodation for Midterm I is the transfer of marks to Midterm II. If a Midterm Exam is missed for a non-approved reason, a grade of zero for the missed examination will be assigned.

You can receive up to 5.0 bonus marks added to your final course grade by completing an optional assignment. If you prepare a bonus assignment as a group, all group members will be assigned the same grade. The due date for submitting the bonus assignment to the Dropbox is April 1 at 5:00 PM ET and no late extensions will be granted.

## 7.2 Group work

Group work for marked assignments is not permitted, with the exception of the bonus assignment (see bonus assignment instructions for details).

# 8 University Statements

## 8.1 Email Communication

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

## 8.2 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. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

## 8.3 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 students (undergraduate, graduate and diploma) 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 their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

## 8.4 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.

## 8.5 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 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website  
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website  
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

## 8.6 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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct  
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct  
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

## 8.7 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.



## **8.8 Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars  
<https://www.uoguelph.ca/academics/calendars>

## **8.9 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).

---