

# ENVS\*2040 - Plant Health and the Environment

## Winter 2025 Course Outline

**Section: 01**

**Credits: 0.50**

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## 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

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.

**Prerequisite(s):** BIOL\*1040 or (2 of BIOL\*1050, BIOL\*1070, BIOL\*1080, BIOL\*1090)

**Department(s):** School of Environmental Sciences

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## 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.

## Lecture Schedule

TuTh 10am-11:20am in RICH\*2520 (1/6 to 4/21)

## Instructor Information

**Coralie Sopher**

Email: [csopher@uoguelph.ca](mailto:csopher@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 "ENVS2040" in the subject line.

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## Additional Support

Teaching Assistants: Farnoosh ([fokhovat@uoguelph.ca](mailto:fokhovat@uoguelph.ca)), Shannon ([smustard@uoguelph.ca](mailto:smustard@uoguelph.ca)) and Ajwal ([ajwal@uoguelph.ca](mailto:ajwal@uoguelph.ca))

Please contact a TA via email to address any questions or concerns with an assignment that they have been assigned to mark. A notice will be posted under "Announcements" on CourseLink indicating which TA will be marking your assignments. Responses to emails for TAs 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 "ENVS2040" in the subject line.

## Learning Resources

### 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 during lectures are considered required, unless the instructor explicitly indicates otherwise. Please check the CourseLink site often (daily is recommended).

## Course Delivery Format

The course will be delivered in class. If there is a need to pivot to an online delivery format, lectures will be delivered synchronously via Zoom through CourseLink, which you can link to via the Zoom tab in the navigation bar. In that case you will need to ensure that you have a Zoom account and the system requirements to run Zoom. Furthermore, Midterm Exams would be completed online during the normally scheduled time and would be made available under the Quizzes tool in the Navbar.

## Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

## Cost of Textbooks and Learning Resources

There are no required textbooks and no costs for textbooks or learning resources.

## Course Learning Outcomes

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 oral and written 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 argument.

## Teaching and Learning Activities

### Lecture Topics

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

- General importance of plants, including those related to biofuels, climate change, wetlands, erosion effects and food security.
- An introduction to plant diseases and disease case studies such as impatiens downy mildew, crown gall, late blight, ergot of rye, South American leaf blight, coffee rust and fairy ring.
- Insects as pests including some basic entomology.
- Insect case studies such as the emerald ash borer, Swede midge, multicolored Asian lady beetle, box tree moth and spotted winged Drosophila.
- 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.

## Assessment Breakdown

Description	Weighting (%)	Due Date
Written Critique Topic/Article Submission	5%	January 20
Written Critique	20%	February 5
Midterm Exam I	22%	February 13
Case Study	25%	March 12
Midterm Exam II	28%	March 27

Bonus Assignment (Optional) - Dropbox Submission	0%	March 31
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## Assessment Details

### Assignment

#### Written critique topic/article selection

**5%**

Instructions for the written critique, including selection of a topic and submission of an appropriate journal article, will be available under the Assessments tab in CourseLink. Available topics will be displayed starting January 10 at 9:00 AM ET under a "Self Enrollment" tab in the Navbar in CourseLink. At that time you will be able to self-enroll in a topic, which will be on a first-come, first-served basis.

Course Learning Outcomes Assessed: 4, 5

#### Written critique

**20%**

Instructions for the written critique will be available under the Assessments tab in CourseLink.

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

### Midterm

#### Midterm exam I

**22%**

Midterm I will take place during the regular lecture period on February 13, and you will have 60 minutes to complete that. Midterm I will cover all materials presented in the course, including any guest lectures, up to and including the lecture on February 11. 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/discuss your exam.

Course Learning Outcomes Assessed: 1, 2, 3

### Case Study

#### Case study

**25%**

Instructions for the Case Study assignment will be available under the Assessments tab in CourseLink. Available topics will be displayed starting January 31 at 9:00 AM ET under a Self-Enrollment tab in the Navbar in CourseLink. At that time, you will be able to self-enroll in a topic, which will be on a first-come, first served basis.

Course Learning Outcomes Assessed: 1, 2, 3, 4

### Midterm

#### Midterm exam II

**28%**

Midterm II will take place during the regular lecture period on March 27, 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 25. 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.

Course Learning Outcomes Assessed: 1, 2, 3

### Optional Assignment

#### Bonus

**0%**

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

Course Learning Outcomes Assessed: 4, 5

## Last Day to Drop Course

The final day to drop Winter 2025 courses without academic penalty is the last day of classes: April 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.

## Course Grading Policies

### Grading Policies

The written critique topic/journal article selection, written critique and case study assignments are to be submitted online via CourseLink to the Dropbox by 5:00 PM ET on the respective due dates. Late assignments will be penalized 10% of the total marks available for the assignment per day or part thereof, including weekend-days, and will no longer be accepted four days after the due date (i.e., not accepted after 5:00 PM ET January 24, February 9 and March 16 for the written critique topic/journal article, written critique and case study assignment, respectively, resulting in a mark of zero for the assignment. If you do not submit your written critique topic/article selection to the Dropbox by 5:01 PM ET January 24, 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 or program counselor (if applicable) at least several days in advance of a due date. 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 an assignment or Midterm date (i.e., several days prior to February 13 and March 27 for Midterms I and II, respectively). 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. Once the due date has passed, requests for extensions will not be granted, unless there are exceptional circumstances.

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 March 31 at 9:00 AM ET.

This course uses Turnitin, integrated with the CourseLink Dropbox tool, for all submitted assignments to detect possible plagiarism, unapproved collaboration or copying of others' work.

### Group Work

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

## 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 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. 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/>)