

**ENVS\*2040 Plant Health and the Environment**

Winter 2018

Section(s): C01

School of Environmental Sciences Credit Weight: 0.50

Version 1.00 - January 08, 2018

# Course Details

## 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-Requisite(s): Equate(s):

* 1. **Course Description**

BIOL\*1040 or (2 of BIOL\*1050, BIOL\*1070, BIOL\*1080, BIOL\*1090) ENVB\*2040

Plant Health and the Environment begins with an overview about how important plants are for humans and the environment. It then focuses on how of different pests and diseases can cause major problems not only for the environment per se, but also for our lives and society. It discusses this in a historical and modern context. Using different case studies, we cover a vast array of local and global pest problems, and discuss the challenges associated with control and management methods.

## Timetable

Room 2529 Richards Building (RICH)

Mondays, Wednesdays, Fridays 9:30 AM – 10:20 AM

## Final Exam

Monday April 9, 2017. 11:30 AM - 01:30 PM. Location TBD.

# Instructional Support

## Instructor(s)

### Simone Haerri Email: Telephone: Office:

**Office Hours:**

[shaerri@uoguelph.ca](mailto:shaerri@uoguelph.ca)

+1-519-824-4120 x56681

Bovey Building (ECBL) Room 2216

Thursdays 10:00 AM - 12:00 NOON. Or see the instructor after class or contact her via email to set up an appointment.

## Teaching Assistant(s)

### Teaching Assistant: Email:

**Office Hours:**

**Teaching Assistant: Email:**

**Office Hours:**

Moez Valliani [mvallian@uoguelph.ca](mailto:mvallian@uoguelph.ca)

Please contact Moez via email to set up an appointment.

Lilieth Ives [lives@uoguelph.ca](mailto:lives@uoguelph.ca)

Please contact Lilieth via email to set up an appointment.

# Learning Resources

## Recommended Resources(s)

### Top Hat (Software)

<https://app.tophat.com/e/052447>

We will be using the Top Hat ([www.tophat.com](http://www.tophat.com/)) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. As cell coverage can be spotty on campus, I recommend connecting through the University of Guelph's wifi.

Top Hat allows us to provide a more engaging and interactive environment, that ultimately helps your learning and boosts your understanding of core concepts. It also allows us to get immediate feedback from you and allows us to adjust the course content accordingly.

You can visit the Top Hat Overview (https://success.tophat.com/s/article/Student-Top-Hat- [Overview-and-Getting-Started-Guide](https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide)) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation will be sent to you by email, but if don’t receive this email, you can register by simply visiting our course website: https://app.tophat.com/e/052447

Note: our Course Join Code is 052447

Unfortunately, Top Hat requires a paid subscription, and a full breakdown of all subscription options available can be found here: [www.tophat.com/pricing](http://www.tophat.com/pricing). Therefore, Top Hat is not manadatory to pass this course and participation is rewarded by bonus marks. However, I strongly recomment the use of Top Hat to facilitate our communication, to increase your learning experience and ultimately to result in a higher grade.

Should you require assistance with Top Hat at any time, due to the fact that they require

specific user information to troubleshoot these issues, please contact their Support Team directly by way of email ([support@tophat.com](mailto:support@tophat.com)), the in app support button, or by calling 1-888- 663-5491.

## Additional Resources(s)

### CourseLink (Website)

[https://courselink.uoguelph.ca](https://courselink.uoguelph.ca/)

The instructors will post announcements, hand-outs, 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 at least once a day.

# Learning Outcomes

## Course Learning Outcomes

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

* + 1. To value the importance of plants for our society by analyzing the historical and current significance of pest and plant-disease related issues.
    2. To summarize life histories of selected disease pathogens and insect pests and evaluate their significance in horticultural, agricultural and forestry environments.
    3. To examine the challenges faced and methods used in the management of plant pathogens and pests.
    4. To critically evaluate scientific literature regarding plant-related issues and to effectively construct and communicate a personal fact-based argument.

## BSc (Env) Program Learning Outcomes

Successfully completing this course will contribute to the following:

|  |  |  |
| --- | --- | --- |
| # Outcome Set Name |  | Course Learning Outcome |
| 1 Discover relationships within and between biotic and abiotic components of environments and their significance, by building from inventory and classification to experimentation and analysis. | | 1, 2, 3, 4 |
| 2 Evaluate multiple solutions to various environmental and scientific questions and assess potential outcomes to justify optimal and ethical solutions. | | 1, 3, 4 |
| 4 Choose and utilize appropriate quantitative and qualitative methods to analyze and interpret environmental data. | | 4 |
| 5 Demonstrate the ability to find and critically evaluate information within | | 1, 2, 3, 4 |

|  |  |  |
| --- | --- | --- |
| # | Outcome Set Name | Course Learning Outcome |
|  | diverse contexts, including scientific, technical, and popular formats. |  |
| 6 | Effectively communicate ideas and information in graphic, oral and written formats, while demonstrating fluency in the terminology of environmental sciences. | 4 |
| 7 | Apply the scientific process and demonstrate an understanding of its value and limitations across a spectrum of academic activities, from the practical to the philosophical. | 2, 3, 4 |
| 8 | Develop an appreciation for the historical evolution of environmental issues and associated changes in analytical and field techniques. | 1, 2, 3, 4 |
| 9 | Apply existing knowledge and understanding to unfamiliar scenarios and environments. | 1, 2, 3, 4 |
| 10 | Demonstrate personal and professional integrity by respecting diverse points of view. This can be achieved through discussions, teamwork, and debates. | 1, 2, 3, 4 |
|  |  |  |

# Teaching and Learning Activities

## Lecture

### Week 1 and Week 2 Topic(s):

General importance of plants

This includes topics such as biofuels, climate change, wetlands, erosion, food security, etc.

### Week 3

**Topic(s):**

Insects as pests

This includes a general discussion about insects as pests and some basic entomology.

### Week 4

**Topic(s):**

Pest management

This includes an introduction to IPM and a discussion about pesticide resistance.

### Week 5 to Week 7

**Topic(s):**

Pest case studies

The pest discussed are subject to change. Some possible candidates are Emerald Ash Borer, Asian Longhorned Beetle, Mountain Pine Beetle, Spotted Winged Drosophila and Colorado Potato Beetle.

### Week 8 to Week 10

**Topic(s):**

Plant disease case study

The diseases discussed are subject to change. Some possible candidates are Crown

gall, Late blight of potato, Ergot of rye, South American leaf blight, Coffee rust and Fairy ring.

### Week 11

**Topic(s):**

Abiotic disorders in plants, weeds and parasitic plants

### Week 12 Topic(s):

Wrap-up

# Assessments

## Marking Schemes & Distributions

|  |  |
| --- | --- |
| Name | Scheme A (%) |
| Case study | 20.00 |
| Midterm Examination | 25.00 |
| Critical Thinking Essay | 25.00 |
| Final Examination | 30.00 |
| Total | 100.00 |

* 1. **Assessment Details**

**Case study (20.00%) Date:** Sun, Feb 11

### Midterm Examination (25.00%)

**Date:** Fri, Mar 2, During regular class time and regular class location.

**Critical Thinking Essay (25.00%) Date:** Sun, Mar 25

You are invited to submit an outline of your essay by March 11, 2018 to receive some preliminary feedback.

### Final Examination (30.00%)

**Date:** Mon, Apr 9, 11:30 AM - 1:30 PM

The final exam will cover all material presented in the course after the midterm examination.

### Top Hat Questions (0.00%)

You can gain up to 2.5% bonus marks by answering top hat questions in-and out of class

# Course Statements

## Grading

Assignments are to be submitted online via CourseLink before midnight on the due date. Assignments handed-in late, for which an extension has not been granted ahead of time, will lose 10% of the total marks for every day (or part thereof) that it is late. If you require an extension on an assignment, you must have a valid reason and contact Dr. Härri in advance of the due date.

Throughout the semester, you will have a chance to obtain a maximum of 2.5 bonus marks by answering Top Hat questions and discussion topics that are randomly dispersed throughout lectures and sometimes assigned to you after class. For the Top Hat questions, the grade will be a combination of participating and answering questions correctly. You can follow your Top Hat

grade in your Top Hat gradebook. The final grade will be transferred to CourseLink at the end of the semester. You will receive the full 5 bonus marks when obtaining a Top Hat grade of 85% or higher (i.e I “gift” you 25%). For a grade below 85%, the bonus marks will be adjusted accordingly (i.e a 70% will be a 95%, resulting in 0.95\*2.5 = 2.375 bonus marks).

In addition, you can obtain 0.25 bonus marks for handing in a well-written and complete summary after a lecture (the day of) that can be shared with the rest of the class. This bonus cannot exceed 2.5 marks (10 summaries) and is only applied if your course grade without this bonus exceeds 50%.

## Group work

This course encourages group work and collaborative problem solving for the in-class top hat questions. Group work for marked assignments is not permitted.

## Recording of lectures

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

# University Statements

## 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.

## 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 regulations and procedures for [Academic Consideration](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml) are detailed in the Undergraduate Calendar.

## Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two- semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for [Dropping Courses](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml) are available in the Undergraduate Calendar.

## 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.

## 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 book their exams at least 7 days in advance, and not later than the 40th Class Day.

More information: [www.uoguelph.ca/sas](http://www.uoguelph.ca/sas)

## 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.

The [Academic Misconduct Policy](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml) is detailed in the Undergraduate Calendar.

## Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the 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.

## Resources

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

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