# Course Outline Form: Fall 2017

## General Information

**Course Title:** ENVS\*3210 Plant Pathology

**Course Description:** Plant Pathology is a one semester course designed to introduce students to the principles and practice of plant pathology in agriculture, horticulture, silviculture and urban environments. The course considers the causes, diagnosis, biology, epidemiology, and management of plant diseases. Current issues in plant health such as food security are presented.

Instructors and guest speakers will explore various groups of plant pathogens, principles of plant pathology, and methods of disease management. In laboratory sessions, students will have the opportunity for hands-on observation and learning about a range of representative plant diseases and pathogens. Laboratory content is provided as presentations, handouts, posters, fresh and preserved disease samples, resources for disease identification, microscope samples, within-lab demonstrations and hands-on exercises. One laboratory session will take students on a tour of several labs at the Pest Diagnostic Clinic (University of Guelph, Laboratory Services). A mini-pathotour will be conducted on campus to provide guidance and opportunity for observing and collecting examples of plant diseases. Each student is required to make a collection of plant disease specimens for submission and marking. Students may start their collection in the summer before the course starts.

**Credit Weight:** 0.50

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

**Campus:** Guelph

**Semester Offering:** F17

**Class Schedule and Location:**

Lectures**:** Graham Hall 3309, Monday and Wednesday 10:30-11:20

Lab:Graham Hall 3309, Monday 14:30-17:20

## Instructor Information

Instructor Name: Dr. Mollah Hamiduzzaman

Instructor Email: mhamiduz@uoguelph.ca

Office location and office hours: Room 3232 EC Bovey building. Office hours by appointment. Please see Dr. Hamiduzzaman immediately after class or contact her via email to arrange an appointment.

## GTA Information

GTA Name: Ryan Gourlie

GTA Email: rgourlie@uoguelph.ca

GTA office location and office hours: Please contact Ryan by e-mail or during a lab session.

## Course Content

**Specific Learning Outcomes:** To develop an understanding and expertise in:

1. Societal importance of plant diseases and plant health;

2. Principles of plant pathology;

3. Diagnosis of plant diseases and identification of plant pathogens;

4. Etiology of representative diseases and pathogens; and

5. Plant health and disease management.

**Lecture Content:**

* Introduction to plant pathology
* Historical perspective, social impact of plant diseases and general concepts in plant pathology
* Causes of plant diseases: abiotic and biotic causes
* Symptoms of plant diseases: vegetables, fruits, cereals, oilseed crops, pulses and forests
* Mycology and classification of fungi
* Plant diseases caused by Prokaryotes, Ascomycetes, Basidiomycetes, Deuteromycetes, Protozoa and Chromista
* Disease cycles and disease development
* Infection biology (pathogenesis), phytoalexins and mycotoxins
* Bacteriology and plant diseases caused by bacteria
* Virology and plant diseases caused by viruses
* Nematology and plant diseases caused by nematodes
* Parasitic plants
* Seed pathology
* Basic elements of disease epidemics and disease forecasting
* Disease management: cultural, biological, chemical, transgenic and IPM
* Host resistance, defense and induced resistance
* Molecular and diagnostic plant pathology
* Other topics TBA

### Labs:

* Plant disease tour and your plant disease collection
* Diseases caused by Prokaryotes
* Diseases caused by Protozoa and Chromista
* Common diseases and physiological disorders on trees and shrubs
* Abiotic disorders
* Plant microbes development video
* Tour of the Pest Diagnostic Clinic, U of G (Monday 30 October at 14:30)
* Diseases caused by Ascomycetes Part I;
* Diseases caused by Ascomycetes part II
* Diseases caused by Basidiomycetes Part I.
* Diseases caused by Basidiomycetes Part II;
* Diseases caused by Deuteromycetes
* Tour of a plant pathology research lab, U of G
* Diseases caused by Viruses; plant parasitic plants
* Work on disease collections

### Seminars: None

### Course Assignments and Tests:

| **Assignment or Test** | **Due Date** | **Contribution to Final Mark (%)** | **Learning Outcomes Assessed** |
| --- | --- | --- | --- |
| Lab quizzes | September 25, October 16, November 6 and November 13; in lab | 16%  | 2-5 |
| Midterm exam | October 23, 10:30-11:20; in class | 20% | 1-5 |
| Practical lab exam | November 27; in lab | 14% | 2-5 |
| Plant disease collection | December 1; in lab | 20% | 3-5 |
| Final exam | December 9, 2:30-4:30 pm, room TBA | 30% | 1-5 |

### Final examination date and time: Saturday 9 December, 14:30-16:30

### Final exam weighting: 30%

## Course Resources

### Required Texts: None

### Recommended Texts:

### Lab Manual:

### Other Resources:

### Field Trips:

### Additional Costs:

## Course Policies

### Grading Policies:

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

Policy on Late Assignments: Late submission of the disease collection will incur a penalty of 10% of the total marks available for the assignment per day, including weekend-days, and will no longer be accepted five days after the due date (i.e., not accepted after 11:20 AM, 6 December), resulting in a mark of zero for the assignment.

### Course Policy on Group Work:

### Students are encouraged to work collaboratively, but must complete and turn in work individually.

### 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 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/).

## Additional Course Information

**Course Material:** The instructors will post announcements, course outline 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.

**Overview of course evaluations:**

**Quizzes:** All quizzes require integration of the materials presented in lectures and in laboratories. There will be four quizzes at the beginning of selected laboratory periods (25 September, 16 October, 6 November and 13 November) worth a total of 16 % of the final course mark and the lowest quiz mark will be dropped if you write all four quizzes.

**Mid-term Examination:** The Mid-Term exam is worth 20% of your final mark. It will take place during the regular 50 minute lecture period on 23 October. The Mid-Term exam will cover all material (including guest lectures) up to and including the 18 October lecture. Midterm exams will not be returned, however they may be viewed and discussed by appointment with Dr. Hamiduzzaman.

**Practical Laboratory Examination:** A laboratory examination will be held during the lab period on 27 November. This examination may utilize diseased plant specimens, microscope slides, photographs of pathogens and diseases, PowerPoint presentations, and/or other materials. Questions may include material from both laboratories and lectures. This laboratory exam is valued at 14% of your final mark.

**Plant Disease Collection:** Each student has the opportunity to prepare and identify a collection of 15 plant diseases. Some time is available during the weekly laboratory periods for identifying specimens for your collection, and there will be a lab that is completely devoted to completing the disease collections. The plant disease collection is valued at 20% and is due on 1 December, by 3:00 PM.

**Final Examination –** The final exam is worth 30% of your final mark and will take place on Saturday 9 December, 14:30-16:30, location TBA. It will be comprehensive (i.e., all material covered in the course).