

## Microbiology and Immunology 3500B Biological and Social Determinants of Infectious Disease

Course outline for Winter 2021



Although this academic year might be different, Western University is committed to a **thriving campus**. We encourage you to check out the [Digital Student Experience](#) website to manage your academics and well-being. Additionally, the following link provides available resources to support students on and off campus: <https://www.uwo.ca/health/>.

### 1. Technical Requirements:



Stable internet connection



Laptop or computer



Working microphone



Working webcam (optional)

### 2. Course Overview and Important Dates: *Time reflects Eastern Time (London ON)*



| Delivery Mode | Dates | Time           |
|---------------|-------|----------------|
| Online        | M/W/F | 8:30 – 9:20 AM |

\*Details about design and delivery of the course are listed below in Section 4

| Classes Start | Reading Week   | Classes End | Study day(s) | Exam Period   |
|---------------|----------------|-------------|--------------|---------------|
| January 11    | February 15-19 | April 12    | April 13     | April 14 - 30 |

\* March 14, 2021: Last day to drop a first-term half course or a first-term full course without penalty

### 3. Contact Information



| Course Co-Coordinators | Contact Information |
|------------------------|---------------------|
| Dr. Ryan Troyer        | rtroyer@uwo.ca      |
| Dr. Eric Arts          | earts@uwo.ca        |

| Graduate Teaching Assistants | Contact Information |
|------------------------------|---------------------|
| Noor Salloum                 | nsallou2@uwo.ca     |
| Connor Richer                | cricher3@uwo.ca     |

| Course Manager    | Contact Information |
|-------------------|---------------------|
| Dr. Kelly Summers | ksummers@uwo.ca     |

This course has several local and external instructors, both scientists and clinicians, who are experts in various aspects of infectious diseases both locally and globally. Email addresses for all instructors are provided on the course schedule. Please address questions regarding lecture material to the OWL Lecture Questions forum first.

#### 4. Course Description and Design

This course provides a multidisciplinary approach to examine the introduction, spread and ecological impact of infectious diseases; the underlying biological and social determinants of infectious diseases with an emphasis on the effects of environment and socio-economic status; lessons learned from global pandemics; treatment/prevention of infectious diseases and challenges with implementation in under-resourced communities. This course has several local and external guest lecturers who are experts in their field.

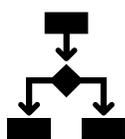
**Prerequisite(s):** Microbiology and Immunology 2500A/B

| Mode                 | Dates        | Time           | Frequency  |
|----------------------|--------------|----------------|--|
| Virtual synchronous  | M/W/F<br>TBD | 8:30 – 9:20 AM | <ul style="list-style-type: none"> <li>• M/W/F lectures will be conducted in live synchronous format with opportunities for students to ask questions via chat.</li> <li>• Live attendance at the first class on Mon Jan 11 is mandatory, attendance will count toward the participation mark. For those that cannot attend this class, there will be an alternative session on Tue Jan 12 at 8:30.</li> <li>• Discussion Group sessions will be conducted live synchronous with student participation in break-out room discussions.</li> <li>• Instructor's weekly office hours</li> </ul> |
| Virtual asynchronous | N/A          | N/A            | Recordings of lectures will be posted on OWL within 24 hours following completion of the synchronous lecture.  |

Closed captioning may be provided on lectures.

A combined instructor/GTA office hour will be scheduled weekly during a 930-1030am timeslot. The day will be posted as an Announcement weekly.

**If you have a question about the lecture material, please follow the steps below:**



**Step 1:** Review your lecture notes for the answer.

**Step 2:** Listen to the lecture on the relevant section.

**Step 3:** Post your question(s) on the OWL Lecture Questions forum.  
[Student questions MUST BE posted on the OWL Lecture Questions forum PRIOR to attending office hours.](#) The TAs and instructors will be answering these questions on a daily basis.

**Step 4:** Attend the Instructor/TA office hours.  
[The office hours will only be used for instructors and TAs to clarify the answer to your question posted on OWL if it is still unclear, or if you would like to discuss lecture material in more depth.](#)

All course material will be posted to OWL: <http://owl.uwo.ca>. Any changes will be indicated on the OWL site and discussed with the class.

If students need assistance, they can seek support on the [OWL Help page](#). Alternatively, they can contact the [Western Technology Services Helpdesk](#). They can be contacted by phone at 519-661-3800 or ext. 83800.

[Google Chrome](#) or [Mozilla Firefox](#) are the preferred browsers to optimally use OWL; update you're your browsers frequently. Students interested in evaluating their internet speed, please click [here](#).

## 5. Learning Outcomes



To instill an appreciation, awareness and understanding of:

1. Global infectious diseases and the frailty of marginalized and economically poor human societies.
2. Viral, bacterial, fungal and parasitic pathogens responsible for current and past global epidemics.
3. The global impact of diarrheal diseases and their association with water management and treatment.
4. Vector-borne illnesses and how elimination of the vector (e.g. mosquito) would harm our ecosystem.
5. Treatment and prevention strategies available to combat many global infectious diseases, but addressing the difficulties of implementation and economic cost of epidemics.
6. The current HIV epidemic and how the world is responding.
7. How pathogens impact our food supply and lead to malnutrition, war and other diseases.
8. How probiotics and the microbiome can displace and prevent various infectious pathogens.

## 6. Online Participation and Engagement



- Students are expected to keep up with course content.
- Students are expected to post their questions regarding lecture content on the OWL Lecture Questions forum after watching the lecture live or from the recording. These will be answered by the instructors or GTAs in a timely manner.
- Students are expected to participate by interacting in the OWL Discussion forums with their peers and instructors.
- Questions emailed to instructors and GTAs on course lecture material will not be answered. Use the OWL Lecture Questions forum and/or attend weekly Instructor/GTA office hours.
- Students are expected to complete readings and view documentaries/videos before the corresponding lectures.
- Students are expected to actively participate in class and OWL discussions.
- Students are expected to participate and contribute as an equal group member in the creation of videos.

## 7. Course Content and Schedule

Please see the course schedule posted on OWL.



## 8. Evaluations

Below is the evaluation breakdown for the course. Any deviations will be communicated.



| Assessment              | Format                       | Weighting | Date  |
|-------------------------|------------------------------|-----------|---|
| Participation Mark      | N/A                          | 18%       | N/A   |
| Newspaper Article       | Written assignment           | 12%       | Feb 5 @ 23:59   |
| Midterm <sup>1</sup>    | Written Take Home Essay Test | 20%       | Questions provided Mon Feb 22 @ 09:30<br><br>Test due Mon Mar 1 @ 23:59 |
| Group Video             | Video Submission             | 25%       | Mar. 29 <sup>th</sup> @ 23:59   |
|                         | Video Grading                |           | Apr. 9 <sup>th</sup> @ 23:59  |
| Final Exam <sup>2</sup> | Written Take Home Essay Test | 25%       | during final exam period TBA  |

<sup>1</sup> Midterm covers lectures from Jan. 11<sup>th</sup> through Feb 22<sup>nd</sup> plus discussion groups and assigned readings

<sup>2</sup> Final Exam is focused on material in the second half of the course (following the midterm test), but cumulative knowledge is necessary. Second half of the course includes student videos, discussion groups, and assigned readings.

### Additional Information on Evaluations:

#### 1) Participation Marks:

Marks are based on participation in class during lectures (asking questions), Discussion Groups (see next sentence), and active participation on OWL Discussion forums (periodically, instructors will post questions on the OWL Discussion forum to initiate class discussion). Attendance and active participation in all four Discussion Group sessions is mandatory. Individuals that must miss a Discussion Group session will be provided with an alternative written assignment to receive credit for the session.

#### 2) Midterm/Final Exam Format:

Format will be essay test with four questions to be completed over a one week period. The exams will focus on topics introduced in lectures and will test your knowledge and understanding of global infectious diseases in marginalized populations. The midterm exam will focus on topics introduced through Feb 22 and the final exam will focus primarily on topics introduced after Feb 22, but some cumulative knowledge is necessary. The exams are open book/open internet and will require at least two scientific articles cited per question as well as the use of reputable lay media when necessary.

**Policy on plagiarism and collaboration:** Plagiarism is expressly forbidden. The exams will be run through Turnitin and high similarity to any previous writings, including your own, will result in a score of zero. We strongly urge you not to collaborate with your classmates, as high similarity between answers will be considered plagiarism for both individuals.

### 3) **Newspaper Article:**

An important aspect of this course is for students to gain an awareness of infectious disease issues, both locally and globally. This assignment allows students to inform others of an issue that interests you in the form of a newspaper article. Please refer to the 'How to Write a Newspaper Article' document.

Each student will write a 2-page newspaper article on a topic of interest determined by the student. The topic can relate to current infectious diseases or pathogen events in plants, animals, humans, etc. If the topic is not obtained from a reliable media or publication source, the student must act as a "reporter" and obtain accurate opinions from reliable sources. Sources of information must be acknowledged and revealed. It will be assessed for plagiarism using Turnitin.

Resources: [https://www.youtube.com/watch?v=8\\_NmVtnEEA8](https://www.youtube.com/watch?v=8_NmVtnEEA8) <http://www.wikihow.com/Write-a-Newspaper-Article>

**Late Newspaper Article Submission Policy.** Failure to submit the newspaper article by the due date will result in a mark of zero with the exception of academic accommodations approved by the Dean's office or self-reported absences. For absences approved by the Dean's office, the article will be due at the discretion of the Course Coordinators. For self-reported absences, the assignment is due 24 hours after the end of the 48 hour accommodation period.

### 4) **Student Group Video:**

**Video Selection.** In class on Jan 18<sup>th</sup>, students will be assigned to groups (random member assignment) and given a list of possible topics. Each group will then have an opportunity to collectively select a video topic.

**Video Format.** Each group will generate a ~10 minute video (15 minute maximum) on their topic. Students must interview *at least one* expert on their topic, plus incorporate current information in reliable media and/or publication sources. With exceptions of topics related to London, Ontario, at least one expert must reside/work outside of the City of London, Ontario. International experts are encouraged but not expected. Each group member must appear either visibly or verbally as a presenter in the video – it is essential that each presenter is identifiable (for marking purposes), so state your name clearly verbally and/or as text in the video. Credits that highlight each student and their contribution to the video must be stated at the end of each video.

Videos will be posted on OWL for viewing and grading by **all** course members. You will not grade your own video.

#### **How to Approach and Interview an Expert.**

1. Do your research first, then select 1-3 experts in the field. Choose the most influential expert(s) (i.e. depending on the video topic, international experts may be more credible than local experts).
2. Prepare the interview questions in advance.
3. Email or call the person(s) and explain the assignment. Ask them if they are agreeable to you recording/videoing the interview. Inform them that the video will be posted on a secure course site (OWL) so it will be exclusive to the course participants. Set a congenial time and place for the interview via Skype, etc. or in person. Provide them with the interview questions in advance.

**Video Grading:** Each member of the group will be given a mark based on:

- 2% View and provide grades for all group videos (except your own).
- 8% Quality of presenters in the video – speaking clearly, slowly, etc. All persons within a group must be identifiable within the video by audio or visual and must be introduced by name. Any exceptions must be approved by the course directors. Contribution to presenting the summary of the video and answering questions posed during class or posted on the OWL forum is included.
- 15% Quality of the video, which includes the quality of the expert(s) interviewed, as ranked by course members. *Notably, TA and Instructor rankings will be weighted higher than student rankings.*

**Student Group Video Expectations.** Each member of the group is expected to participate and *contribute equally* in the creation of the video. The Course Coordinators must be notified immediately in the event that a student within the group is not participating equally in its creation. This will lead to a one-on-one meeting between the student and the course coordinator(s) for resolution and a participation mark penalty to be determined by the course coordinators.

In the event that a student is unable to participate in its entirety, or in part, of the creation of the video due to illness or other reason approved by the Dean’s office, the course coordinators will determine a suitable resolution. This may involve an oral presentation given by the student to the course coordinators/TAs on their designated material or an essay.

**Information about late or missed evaluations:**

- See above for policy on late newspaper article submission.
- Group videos are due Mar 29 @ 23:59 and must be submitted by this deadline (to allow fellow students adequate time to view and mark the videos). In the event of extreme circumstances, acceptance of late group videos is at the discretion of the course instructors.
- The midterm and final are take-home essay format so there are no make-up tests. For self-reported absences, the test is due 24 hours after the end of the 48 hour accommodation period.

Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

|    |          |   |
|----|----------|---|
| A+ | 90-100   | One could scarcely expect better from a student at this level   |
| A  | 80-89    | Superior work which is clearly above average                    |
| B  | 70-79    | Good work, meeting all requirements, and eminently satisfactory |
| C  | 60-69    | Competent work, meeting requirements                            |
| D  | 50-59    | Fair work, minimally acceptable                                 |
| F  | below 50 | Fail  |

## 9. Communication:



- Students should check the OWL site every 24 – 48 hours.
- This course will use Zoom for weekly instructor and GTA office hours.
- This course will use two OWL forums: one for Lecture Questions and one for Discussion on topics posted by instructors.
- Students should post all course-related questions on the Lecture Questions forum so that everyone can access answers to questions.
- The forums will be monitored frequently by instructors and teaching assistants.
- Students with personal concerns should email their instructor(s). Questions on course material sent to instructors or GTAs via email will not be answered.

## 10. Office Hours:



- Office hours will be held remotely using Zoom weekly.
- Dates/times will be announced on OWL weekly.
- Instructor/GTA office hours will be available for everyone to attend.

## 11. Resources



- All resources will be posted in OWL.
- Required readings will be posted in OWL.
- There is no textbook requirement for this course.

## 12. Professionalism & Privacy:



Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:

- Students are expected to follow online etiquette expectations provided on OWL.
- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared.
- Recordings are not permitted (audio or video) without explicit permission.
- Permitted recordings are not to be distributed – it is illegal to share them.
- Students will be expected to take an academic integrity pledge before some assessments.
- All recorded sessions will remain within the course site or unlisted if streamed.

### 13. How to Be Successful in this Class:

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful.



1. Invest in a planner or application to keep track of your courses. Populate all your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
2. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class. Keep up with the material.
3. Follow weekly checklists created on OWL or create your own to help you stay on track.
4. Take notes as you go through the lesson material. Treat this course as you would a face-to-face course. Keeping handwritten notes or even notes on a regular Word document will help you learn more effectively than just reading or watching the videos.
5. Connect with others. Try forming an online study group and try meeting on a weekly basis for study and peer support.
6. Do not be afraid to ask questions. If you are struggling with a topic, check the online discussion boards or contact your instructor(s) and/or teaching assistant(s).
7. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.

### 14. Western Academic Policies and Statements

#### Absence from Course Commitments

##### [Policy on Academic Consideration for Student Absences](#)

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a **self-reported absence** or via the **Academic Counselling** unit. Students have two self-reports to use throughout the academic year; absence from course commitments including tests, quizzes, presentations, labs, and assignments that are worth 30% or less can be self-reported. Self-reported absences cover a student for 48 hours (yesterday + today or today + tomorrow). Your instructor will receive notification of your consideration; however, you should contact your instructor immediately regarding your absence. Students are expected to submit missed work within 24 hours of the end of the 48-hour period. Please review details of the [university's policy on academic consideration for student absences](#).

If you have used both their self-reported absences or will miss more than 48 hours of course requirements, a Student Medical Certificate (SMC) should be signed by a licensed medical or mental health practitioner and you should contact academic counselling. Academic Counselling will be operating virtually this year and can be contacted at [scibmsac@uwo.ca](mailto:scibmsac@uwo.ca).

#### Accommodation for Religious Holidays

The policy on Accommodation for Religious Holidays can be viewed [here](#).

#### Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found [here](#).

## Academic Offences

“Scholastic offences are taken seriously, and students are directed [here](#) to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence.

## Accessibility Statement

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review [The policy on Accommodation for Students with Disabilities](#).

## Correspondence Statement

The centrally administered **e-mail account** provided to students will be considered the individual’s official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner. You can read about the privacy and security of the UWO email accounts [here](#).

## 15. BMSUE Academic Policies and Statements

### Copyright and Audio/Video Recording Statement

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. You must always ask permission to record another individual and you should never share or distribute recordings.

### Rounding of Marks Statement

Across the Basic Medical Sciences Undergraduate Education programs, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. **Final grades** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 will NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark “bumping” will be denied.

## 16. Support Services

The following links provide information about support services at Western University.

[Academic Counselling \(Science and Basic Medical Sciences\)](#)

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)