

Microbiology and Immunology
[Molecular Virology MicroImm 4200B]

Course Syllabus for Winter 2024



Western University is committed to a **thriving campus**; therefore, your health and wellness matter to us! The following link provides information about the resources available on and off campus to support students: <https://www.uwo.ca/health/> Your course coordinator can also **guide you** to resources and/or services should you need them.

1. **Technical Requirements:**



Stable internet connection



Laptop or computer

2. **Important Dates:**



Classes Begin	Classes End	
Monday, January 8, 2024	Monday, April 8, 2023	
* March 7, 2023: Last day to drop a second-term half course without penalty		
Reading Week	Study day(s)	Exam Period
February 17-25	April 9-10	April 11-30

3. **Contact Information**



Course Coordinator	Contact Information
Instructor(s) or Teaching Assistant(s)	Contact Information

4. Course Description and Design

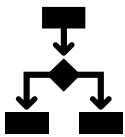
Delivery Mode: In person

Course Description: Molecular mechanisms involved in viral replication and host pathogen relationships. This course focuses on animal and human viruses and their host-pathogen relationships including immune evasion strategies, mechanisms of host restriction, evolutionary relationships, disease pathogenesis and therapeutic applications of viral vectors.

Prerequisite(s): Microbiology and Immunology 3100A with a mark of at least 70%.]

Timetabled Sessions

Component	Date(s)	Time
Lectures		
Student Presentations		



- Asynchronous pre-work must be completed by noon 1 day prior to sessions
- Attendance at sessions is required
- Missed work should be completed within 24 hours

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 your browsers frequently. Students interested in evaluating their internet speed, please click [here](#).

5. Learning Outcomes

This course is primarily designed to provide the student with advanced knowledge in human and animal virology with an emphasis on mechanisms of disease pathogenesis. This includes molecular mechanisms involved in viral replication and host-pathogen relationships. In addition, recent topics related to human and animal virology from the current literature or reputable sources from the internet will be covered where appropriate. Relevant reference to bacterial and plant virology may be made if applicable.

- Upon successful completion of this course, students will be able to:
- appreciate the breadth of viral diversity
- acquire an understanding of the molecular basis of the replicative cycles of selected viruses, including viral reprogramming of cellular growth and gene expression
- understand the profound impact of viruses on human health
- have an advanced understanding of cellular antiviral responses
- understand the role of anti-viral therapies and vaccination
- develop an understanding of molecular approaches to study viruses

Faculty Lectures: While the lecturers will upload their Powerpoint slides and their prerecorded lectures on OWL a day or two before the class takes place, the information on the Powerpoint slides should not be considered as all that you should know for the examinations. The Powerpoint slide content

serves as the basis or background upon which the lecturer may speak on. Therefore, you are required to know information in the Powerpoint slides, as well as the verbal content presented in the actual class. If you do not understand some aspect of a given lecture, the course TAs are more than happy to help you. All lectures will also be recorded and posted on OWL prior to the scheduled normal class time.

Student Presentations: Attendance at student presentation group discussion sessions is MANDATORY and will be recorded. Presentations consist of participation in a group oral presentation (4 students per group) on a current topic of interest to and/or related to animal virology. Each student presentation topic will be the focus of an ~30 minute group discussion centered around the assigned topic. Group presentations will be ~50 minutes in length and will be presented live.

Each student group must also prepare a single 2-page, single spaced handout summarizing the information given in the presentation. All references used to gather information for the presentation must be provided on an additional page attached to the handout (i.e. page 3). References must be cited in-text, using any suitable format. Each group will also provide 6 multiple choice answer questions related to key concepts/learning objectives from their presentation suitable for inclusion in the final exam. The answers to these questions must be present in the handout. This handout must be uploaded to the provided Turnitin link in the 'Assignments' tab on OWL no later than noon, one day preceding the corresponding presentation so that it can be posted on OWL for the class prior to the assigned presentation slot. Handouts demonstrating clear plagiarism and/or lacking proper scientific referencing will receive a mark of 0 for the presentation. Presentations will be evaluated based on the handout, presentation content, presentation skill, and ability to answer questions posed by the fellow students and attending faculty.

We expect each group to present current developments on molecular virological aspects, mechanisms of disease pathogenesis, and therapeutic applications relevant to your assigned topic. This includes presenting any information new and relevant to the following: viral life cycle, clinical presentation, pathogenesis and diagnosis, epidemiology, molecular epidemiology and evolutionary molecular biology and genetics, treatment and prevention. Thus, the entire scope of the topic chosen does not have to be covered. Be selective and limit the scope of your presentation to material that can be covered in depth in the time allotted. The portion covered and a rationale for choosing this portion should be presented at the beginning of the presentation.

Students are encouraged to begin researching their topic early. For references, students can begin by searching for pertinent recent review articles on their assigned topic using PubMed. Recent review articles are useful to find references for specific current papers. The internet can also be used to gather information related to the impact of the presentation topic relevant to the general public. However, it should be noted that students are expected to go beyond the use of review articles by presenting data from current commentaries and papers on virology in journals (typically 2017 or later) such as Science, Nature, Cell, J. Virology, and Virology. Students can also use social media where appropriate if it provides specific context to aspects of their presentation. This must be properly cited as well. However, scientific literature sources, as indicated above, should be your first and primary source of information.

6. Course Content and Schedule

A Schedule with all lecture and student presentation topics, assignment due dates, and other scheduling information can be found as a link in the “Student Presentations” tab on the MicroImm 4200B OWL site.

7. Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students are expected to participate in student presentation session discussions
- Students can also participate by interacting in the forums with their peers and instructors

8. Evaluation

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

Assessment	Content	Weighting	Due Date
Midterm Exam		37.5%	
Final Exam	and all 14 student presentations	37.5%	
Student Presentation	Group presentation handout (including references)	5%	
	Group presentation content/presentation skills and ability to answer questions	15%	
	Participation*	5%	



*Participation mark is based on 1) attendance at all student presentations, and 2) asking questions to the presenting students. Each student’s attendance and participation in the discussion sessions will be recorded. To obtain full participation marks, you should ask multiple questions over the course of all the student presentations. The goal is to stimulate discussion and learn as a group. Questions that promote discussion will count more than “token” questions asked simply to achieve a participation mark.

Midterm and Final Exam Format:

The midterm and final examination are not cumulative with respect to lecture content. However, an understanding of the methodologies used to study viruses presented in the first lecture and all subsequent lectures will be on both tests, as these subjects are relevant to all viruses. The midterm exam will likely be in-person and limited to 2 hours during the normally assigned class time. The final examination will be in-person during the normally scheduled final exam period. It will similarly be time limited to 2 hours. It will include all lecture material given after the midterm, plus questions based on the handouts from all student presentations.

Each lecturer will have a separate exam section and the type of questions may vary with the lecturer. However, all lecturers will mainly pose questions requiring essay and/or short answer style answers. More details will be provided closer to the date of the respective examinations.

Although there may be some multiple-choice style questions, they will comprise only a minor part of each exam. Any multiple-choice exam questions will be presented in a linear fashion, such that once answered, you will not be able to go back and alter your choice. Students are expected to answer questions using proper grammar and format. Marks will be deducted for improper grammar and formatting, as well as essay questions answered in point form.

Short answer and essay exam questions will be subject to Turnitin analysis prior to marking. If plagiarism is detected that question will get a zero mark.

Students are expected to be able to integrate the information provided in multiple lectures. Thus, questions may cross one or more lectures by an individual instructor or by different instructors.

Students should study with this in mind and be prepared to compare and contrast different viruses and their host- pathogen relationships.

- All assignments are due at 12 noon EST unless otherwise specified
- Students are responsible for ensuring that the correct file version is uploaded; incorrect submissions including corrupt files could be subject to late penalties (see below) or a 0
- Written assignments will be submitted to Turnitin (statement in policies below)
- Students will have unlimited submissions to Turnitin
- Rubrics will be used to evaluate assessments and will be posted with the instructions
- A student might not receive the same grade as their group members if it is determined that the distribution of work was not equal
- After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days
- Any grade appeals on assignments, quizzes, or midterms must be received within 3 weeks of the grade being posted.

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

Information about late or missed evaluations:

- Late assessments without self-reported absences or accommodation will be subject to a late penalty 25%/day
- Late assessments with self-reported absences or accommodation should be submitted within 24 hours of the end of the self-report or accommodation (e.g., due Fri 11:55 PM EST; self-report covers Fri/Sat; new deadline is Sun by 11:55 PM EST OR 24 hours after the end of the accommodation period)
- One make-up test will be offered and will occur in accordance with the student and instructor's availability.
- The midterm, final exam and group presentation must be completed to pass the course. Makeup midterm and final exams will be scheduled as stated above and missed student presentations will be scheduled in accordance with the student and instructor's availability.
- If a make-up assessment is missed with documentation, the student will receive an INC and complete the task the next time the course is offered

INC (Incomplete Standing): If a student has been approved by the Academic Counselling Office (in consultation with the instructor/department) to complete term work at a later date, an INC will be assigned. Students with INC will have their course load in subsequent terms reduced to allow them to complete outstanding course work. Students may request permission from Academic Counselling to carry a full course load for the term the incomplete course work is scheduled.

SPC (Special examination): If a student has been approved by the Academic Counselling Office to write a Special Examination and the final exam is the only outstanding course component, an SPC will be assigned. If the class has a makeup exam, the student is expected to write the makeup exam. If the class doesn't have a makeup exam or the student misses the makeup exam for reasons approved by the Academic Counselling Office, the student will write the exam the next time the course is offered. Outstanding SPCs will reduce the course load for the term the exam is deferred as outlined in [Types of Examinations](#) policy.

9. Communication:



- Students should check the OWL site every 24–48 hours
- Students should email their instructor(s) and contact their teaching assistant(s) using OWL
- Emails will be monitored daily; students will receive a response in 24–48 hours
- Students should post all course-related queries on the discussion forum so that everyone can access the questions and responses

10. Office Hours:



- Office hours will be held remotely using Zoom
- Office hours will be booked by email.

11. Resources



- All resources will be posted in OWL
- All materials are provided free-of-cost. There is no textbook to purchase 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:

- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared (e.g., Must Knows Facebook group, Course Hero, Chegg, etc.)
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed
- Students may be expected to take an academic integrity pledge before some assessments

Western is committed to providing a learning and working environment that is free of harassment and discrimination. All **students**, staff, and faculty have a role in this commitment and have a responsibility to ensure and promote a safe and respectful learning and working environment.

Relevant policies include Western's [Non-Discrimination/Harassment Policy](#) (M.A.P.P. 1.35) and [Non-Discrimination/Harassment Policy – Administrative Procedures](#) (M.A.P.P. 1.35).

Any **student**, staff, or faculty member who experiences or witnesses' behaviour that may be harassment or discrimination **must report the behaviour** to the Western's [Human Rights Office](#). Harassment and discrimination can be human rights-based, which is also known as EDI-based, (sexism, racism, transphobia, homophobia, islamophobia, xenophobia, antisemitism, and ableism) or non-human rights-based (personal harassment or workplace harassment).

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 your time throughout the course.
2. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class.
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. 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

A. Absence for medical illness:

Students must familiarize themselves with the [Accommodation for Illness Policy](#).

A student seeking academic accommodation for any **work worth less than 10%** must contact the instructor or follow the appropriate Department or course specific instructions provided on the course outline. Instructors will use good judgment and ensure fair treatment for all students when considering these requests. You are not required to disclose details about your situation to your instructor; documentation is not required in this situation, and you should not send any pictures to your instructor.

If you are unable to meet a course requirement for any **work worth 10% or greater** due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counseling as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. Please note that the format of a make-up test, exam, or assignment is at the discretion of the course coordinator.

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

B. Absence for non-medical reasons:

Student absences might also be approved for non-medical reasons such as religious holidays and compassionate situations. Please review the policy on [Accommodation for Religious Holidays](#). All non-medical requests must be processed by Academic Counselling. Not all absences will be approved; pay attention to the academic calendar and final exam period when booking any trips.

C. 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 Offenses

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](#).

Discovery Credit Statement

Students are permitted to designate up to 1.0 Discovery Credit course (or equivalent) for pass/fail grading that can be counted toward the overall course credits required for their degree program. The details of this policy and the deadlines can be found [here](#).

Turnitin and other similarity review software

All assignments will be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. Students will be able to view their results before the final submission. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between Western University and [Turnitin.com](#).

15. BMSUE Academic Policies and Statements

Cell Phone and Electronic Device Policy (for in-person tests and exams)

The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School that any electronic devices, i.e., cell phones, tablets, cameras, or iPod are strictly prohibited. These devices **MUST** be left either at home or with the student's bag/jacket at the front of the room and **MUST NOT** be at the test/exam desk or in the individual's pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The program is not responsible for stolen/lost or broken devices.

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.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

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

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)