

**Microbiology and Immunology**  
**2500B: Biology of Infection and Immunity**

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



Working microphone



Working webcam

**2. Important Dates:**



Classes Begin	Classes End
Monday, January 8 <sup>th</sup> , 2024	Monday, April 8 <sup>th</sup> , 2024

\* March 7, 2024: Last day to drop a second term half course without academic penalty.

Reading Week	Study day(s)	Exam Period
February 17 <sup>th</sup> – February 25 <sup>th</sup>	April 9 <sup>th</sup> and April 10 <sup>th</sup>	April 11 <sup>th</sup> – April 30 <sup>th</sup>

**3. Contact Information**



Course Coordinator	Contact Information

Instructor(s)	Contact Information

Teaching Assistants	Contact Information

#### 4. Course Description and Design

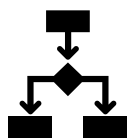
**Delivery Mode:** in-person

The biology of the human immune system and microbial pathogens including viruses, bacteria, parasites and fungi. Host-pathogen relationships and mechanisms used by microbes to cause disease will be emphasized.

Prerequisite(s): Either Biology 1001A or Biology 1201A; and one of Biology 1002B, Biology 1202B, Integrated Science 1001X.

Extra Information: 3 lecture hours.

Course Weight: 0.50



#### Timetabled Sessions

Component	Date(s)	Location	Time
Lecture			

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



The primary purpose of this course is to familiarize students with infection and immunity, including a basic understanding of how the human immune system responds to different infectious agents and a basic understanding of bacterial, viral, fungal, and parasitic pathogens.

## 6. Course Content and Schedule



Unit	Lecture	Date	Topic	Instructor	
Immunology	1	Monday, January 8	Introduction to Immunology		
	2	Wednesday, January 10	Innate Immunity		
	3	Friday, January 12			
	4	Monday, January 15			
	5	Wednesday, January 17	Introduction to Adaptive Immunity		
	6	Friday, January 19	T cell Immunity		
	7	Monday, January 22			
	8	Wednesday, January 24	B cell Immunity		
	9	Friday, January 26			
-	Monday, January 29	Immunology Q&A			
	<b>Midterm Test 1 (in-class)</b>	<b>Wednesday, January 31</b>	<b>Lectures 1 – 9 (inclusive)</b>		
Bacteriology	10	Friday, February 2	Bacteriology Introduction		
	11	Monday, February 5	The Black Death		
	12	Wednesday, February 7	Antibiotics and Antibiotic Resistance		
	13	Friday, February 9	Tuberculosis and Leprosy		
	14	Monday, February 12	Bacterial Meningitis		
	15	Wednesday, February 14	STDs		
	16	Friday, February 16	Lyme disease		
	-	February 17 – February 25	SPRING READING WEEK (no lectures)		
	17	Monday, February 26	<i>Streptococcus pyogenes</i>		
-	Wednesday, February 28	Bacteriology Q&A			
	<b>Midterm Test 2 (in-class)</b>	<b>Friday, March 1</b>	<b>Lectures 10 – 17 (inclusive)</b>		
Other Infectious Agents	18	Monday, March 4	Prions		
	19	Wednesday, March 6	Parasitology Introduction		
	20	Friday, March 8	Protozoans and Helminths		
	21	Monday, March 11	Mycology Introduction		
	22	Wednesday, March 13	Medical Mycology		
-	Friday, March 15	Other Infectious Agents Q&A			
Virology	23	Monday, March 18	Introduction to Virology		
	24	Wednesday, March 20	Viral Infectious Cycle		
	25	Friday, March 22	Viral Genomes		
	26	Monday, March 25	Viral Structure		
	27	Wednesday, March 27	Viral Entry		
	-	Friday, March 29	GOOD FRIDAY (no lecture)		
	28	Monday, April 1	Viral Pathogenesis		
	29	Wednesday, April 3	HIV Pathogenesis		
	30	Friday, April 5	Koala Retroviruses		
-	Monday, April 8	Virology Q&A			
	<b>Final Exam</b>	<b>TBD</b>	<b>Lectures 18 – 30 (inclusive)</b>		

## 7. Participation and Engagement



- Students are expected to keep up with course content
- Students are expected to participate and engage with content as much as possible
- Students can participate by interacting in the forums with their peers and instructors
- Students can participate during in-person lecture sessions

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

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

**Step 2:** Post your question(s) on the OWL Forum.

Student questions **MUST BE** posted on the OWL Forum **PRIOR** to attending office hours. The TAs and instructors will be answering these questions on a daily basis.

**Questions emailed to instructors/TAs on course lecture material will not be answered.**

## 8. Evaluation

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

Assessment	Weighting	Date	Format
<b>Midterm 1:</b> Immunology	30%		Multiple Choice Questions (single and multiple answer)
<b>Midterm 2:</b> Bacteriology	30%		
<b>Final Exam:</b> Virology and Other Infectious Agents	40%		

- Any grade appeals on assignments, quizzes, or midterms must be received within 3 weeks of the grade being posted.
- 15% of your course grade will be evaluated and returned 3 days prior to the drop deadline (statement in policies below).



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.

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

### Information about late or missed evaluations:

- There are no make-up midterm tests in this course; rather, you will write an alternative final exam with the weight of the missed test(s) transferred to the final exam (i.e., if you miss a midterm worth 30%, the weight of the final exam will be 70%).
- Students must receive academic consideration or accommodation to be allowed to write an alternative final exam.
- If the make-up final exam is missed with documentation, the student will receive an SPC and complete the final exam the next time the course is offered.

- Students must complete midterm 1, midterm 2, and the final exam to pass the course. If a student misses the midterm(s) with accommodation, an alternative final must be completed to pass the course.

**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) using OWL Messages
- Emails will be monitored daily; students will receive a response in 24–48 hours
- This course will use OWL Forums for discussions
- 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 led by TAs and only scheduled if requested—please contact the Course Coordinator via OWL Messages if you are interested.

## 11. Resources



- All resources will be posted in OWL
- There is no required textbook
- There may be journal articles to read

## 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

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](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% Rule

According to the [Evaluation of Academic Performance](#) policy, at least three days prior to the deadline for withdrawal from a 1000- or 2000-level course without academic penalty, students will receive assessment of work accounting for at least 15% of their final grade. Generally, students can expect some form of feedback on their performance in a course before the drop date. In rare instances, at the Dean's

discretion, an exemption can be issued, which also must be noted in the course syllabus. Deans should review exemptions on a course-by-course basis each time an exempted course is offered.

## 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, e.g., cell phones, tablets, cameras, smart glasses, smart watch 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., 74.45 becomes 74, and 74.50 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](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](mailto:support@uwo.ca).

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

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)