

**Microbiology & Immunology  
3300B**

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:**



Laptop or  
computer

2. **Important Dates:**



Classes Begin	Classes End
Monday, January 8, 2023	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



Teaching Assistants	Contact Information

Instructors	Contact Information

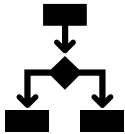
## 4. Course Description and Design

### Delivery Mode: IN PERSON

[This course covers elementary concepts of innate and adaptive immunity, structure and function of the immune system, antigens and antibodies, genetic basis of the immune response, humoral and cellular immunity, immunological tolerance, organ and tissue transplantation, allergy, and autoimmune disease.

### Timetabled Sessions

Component	Date(s)	Time
Lecture		



- Attendance at sessions is required
- A recording MAY be provided at the discretion of the lecturer. Students are responsible for ensuring access to recordings (with permission) or lecture notes for missed sessions.

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



Upon successful completion of this course, students will develop an advanced working knowledge of the immune system, including its beneficial role in protection from infectious diseases, and its detrimental role in causing certain immune-mediated diseases

## 6. Course Content and Schedule

1) Jan 8 (M)	Course Introduction, Key Concepts in Immunity	
2) Jan 10 (W)	Pattern Recognition Receptors, Cytokines, and Signaling	
3) Jan 12 (F)	Barrier Immunity and Myeloid Cells	
4) Jan 15 (M)	Bacterial Evasion of Innate Immunity	
5) Jan 17 (W)	The Complement System	
6) Jan 19 (F)	Inflammation	
7) Jan 22 (M)	Clinical Case Studies	
8) Jan 24 (W)	Mutant Animal Models in Immunology	
9) Jan 26 (F)	Lymphoid Organs and Lymphoid Effector Functions	
Jan 29 (M)	<b>Test #1 (Lectures 1-8)</b>	
10) Jan 31 (W)	Immunoglobulin Receptors: BCR Gene Rearrangement	
11) Feb 02 (F)	B Cell Development	
12) Feb 05 (M)	The Major Histocompatibility Complex I	
13) Feb 07 (W)	The Major Histocompatibility Complex II	
14) Feb 09 (F)	Monoclonal Antibodies and Flow Cytometry	
15) Feb 12 (M)	T Cell Development	
16) Feb 14 (W)	Primary Immunodeficiencies	
17) Feb 16 (F)	So, you want to be a scientist? (science careers lecture)	
Feb 17-25	<b>no lectures - Reading Week</b>	
Feb 26 (M)	<b>Test #2 (Lectures 9-16)</b>	
18) Feb 28 (W)	T Cell-Mediated Immunity	
19) Mar 01 (F)	Humoral Immunity	
20) Mar 04 (M)	Humoral Immunity 2: Diversity in the Antibody Response	
21) Mar 06 (W)	Dynamics of the Immune Response and Immunological Memory	
22) Mar 08 (F)	Immune Tolerance	
23) Mar 11 (M)	Mucosal Immunology 1	
24) Mar 13 (W)	Mucosal Immunology 2	
25) Mar 15 (F)	In Vivo Microscopy of the Immune System	
Mar 18 (M)	<b>Test #3 (Lectures 18-25)</b>	
26) Mar 20 (W)	Cancer Immunology	
27) Mar 22 (F)	Cancer Immunotherapy	
28) Mar 25 (M)	Vaccine Strategies, Development and Challenges	
29) Mar 27 (W)	Vaccine Strategies: Application as Medicine	
Mar 29 (F)	<b>No classes – Good Friday</b>	
30) Apr 01 (M)	Allergy & Allergic Diseases	
31) Apr 03 (W)	Autoimmune Diseases	
32) Apr 05 (F)	Transplant Immunology	
33) Apr 08 (M)	Wrapping Up: Complexity in the Immune System	
	<b>Final Exam</b> during the final exam period, to be announced	

## 7. Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students are expected to attend all lectures in person
- Students can also participate by interacting in the forums with their peers and instructors. The forums will be our primary method to answer student questions.

## 8. Evaluation

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

Assessment	Format	Weighting	Date
Test 1	In-Class	20%	
Test 2	In-Class	20%	
Test 3	In-Class	20%	
Final Exam	In Person	40%	

- Midterm Tests and Final Exam will consist of Multiple Choice, Multiple Multiple Choice, and Short Answer Questions from lectures and any assigned readings.
- Midterm Tests will be delivered during regular class hours.
- The Final Exam will be 2.5 hrs in length, and will be cumulative, but with emphasis on the untested material taught after the third midterm. It will require integration of knowledge.
- 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.
- 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:

- Missed Midterm Policy:** If you use a self-reported absence or you suffer an illness or other emergency that interferes with writing either midterm, upon the recommendation of a Counsellor from your Dean's office, you will be allowed to write an alternative cumulative final exam that will be reweighted to reflect the missed midterm(s). The alternative final exam will be 3hrs in length and not more.
- Missed Final Exam Policy.** There will be **one makeup final exam** (regular or alternate) scheduled for students who miss the final exam with approved absences. Students who miss the makeup final exam will write it the next time this course is offered.
- 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
- This course will use OWL for discussions
- Students should post all course-related queries on the discussion forum so that everyone can access the questions and responses
- The Discussion Forums will be monitored daily by Teaching Assistants or Instructors

## 10. Office Hours:



- Office hours will be held in person or online, at the discretion of the Instructor
- Instructors will post instructions for office hours on OWL, as appropriate

## 11. Resources



- All resources will be posted in OWL
- Required textbook: Kuby Immunology, 8<sup>th</sup> Edition

## 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 will 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 Counselling 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. 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 classes, 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](#)