

Microbiology & Immunology 3300B

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



(suggested) Working webcam

2. Course Overview and Important Dates:



Delivery Mode	Dates	Time
Online	M/W/F	9:30 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 13 - 21	April 12		April 14 - 30

*March 7, 2021: Last day to drop a second-term half course or a second-term full course without penalty

3. Contact Information



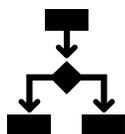
Course Coordinator	Contact Information
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Teaching Assistants	Contact Information
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Instructors	Contact Information
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Dr. Jessica Prodger	jprodge@uwo.ca
Dr. David Zuanazzi	dmachad@uwo.ca
Dr. Corby Fink	cfink4@uwo.ca

4. Course Description and Design

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.



Mode	Dates	Time	Frequency
Virtual synchronous	M/W/F	9:30am	weekly

- A recording will be provided for synchronous sessions
- Some lectures will be delivered asynchronously, at the instructor's discretion

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

5. Learning Outcomes

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 11 (M)	Course Introduction, Key Concepts in Immunity	Kerfoot
2) Jan 13 (W)	Barrier Immunity and Myeloid Cells	Heinrichs
3) Jan 15 (F)	Pattern Recognition Receptors, Cytokines, and Signaling	Kim
4) Jan 18 (M)	The Complement System	DeKoter
5) Jan 20 (W)	Inflammation	DeKoter
6) Jan 22 (F)	Clinical Case Studies	DeKoter
7) Jan 25 (M)	Bacterial Evasion of Innate Immunity	Heinrichs
8) Jan 27 (W)	Mutant Animal Models in Immunology	Kerfoot
Jan 29 (F)	Test #1 (Lectures 1-8)	
9) Feb 1 (M)	Lymphoid Organs and Lymphoid Effector Functions	Kerfoot
10) Feb 3 (W)	Immunoglobulin Receptors: BCR Gene Rearrangement	DeKoter
11) Feb 5 (F)	B Cell Development	DeKoter
12) Feb 8 (M)	The Major Histocompatibility Complex I	DeKoter
13) Feb 10 (W)	The Major Histocompatibility Complex II	DeKoter
Feb 12 (F)	No class	
Feb 15-19	Family Day/Reading Week	
14) Feb 22 (M)	T Cell Development	Kerfoot
15) Feb 24 (W)	Primary Immunodeficiencies	Taefehshokr
16) Feb 26 (F)	Monoclonal Antibodies and Flow Cytometry	DeKoter
Mar 1 (M)	Test #2 (Lectures 9-16)	
17) Mar 3 (W)	T Cell-Mediated Immunity	Kerfoot
18) Mar 5 (F)	Humoral Immunity	Kerfoot
19) Mar 8 (M)	Humoral Immunity 2: Diversity in the Antibody Response	Kerfoot
20) Mar 10 (W)	In Vivo Microscopy of the Immune System	Kerfoot
21) Mar 12 (F)	Dynamics of the Immune Response and Immunological Memory	Kerfoot
22) Mar 15 (M)	Immune Tolerance	Kerfoot
23) Mar 17 (W)	Mucosal Immunology 1	Prodger
24) Mar 19 (F)	Mucosal Immunology 2	Zuanazzi
Mar 22 (M)	Test #3 (Lectures 17-24)	
25) Mar 24 (W)	Vaccine Strategies, Development and Challenges	Kerfoot
26) Mar 26 (F)	Vaccine Strategies: Application as Medicine	Kerfoot
27) Mar 29 (M)	Cancer Immunology	Fink
28) Mar 31 (W)	Cancer Immunotherapy	Fink
Apr 2 (F)	Good Friday, No class	
29) Apr 5 (M)	Allergy & Allergic Diseases	Kerfoot
30) Apr 7 (W)	Autoimmune Diseases	Kerfoot
31) Apr 9 (F)	Transplant Immunology	Kerfoot
32) Apr 12 (M)	Wrapping Up: Complexity in the Immune System	Kerfoot
	Final Exam during the final exam period, to be announced	



7. Online Participation and Engagement



- Students are expected to participate and engage with content by reading assigned supplemental material provided.
- Students are strongly encouraged to attend the live synchronous lectures when possible.
- Students can also participate by interacting in the OWL forums with their peers and instructors. The OWL forums will be our primary method to answer questions.

8. Evaluation

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

Assessment	Format	Weighting	Due Date
Test 1	Online	20%	Jan 29
Test 2	Online	20%	Mar 1
Test 3	Online	20%	Mar 22
Final Exam	Online	40%	TBA

- 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 cumulative and 2.5-hours in length, 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



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:

- 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, the student will receive an INC and complete the task the next time the course is offered

9. Communication:



- Students should check the OWL site every 24 – 48 hours
- This course will use the OWL forum for discussions
- Students should post all course-related content on the discussion forum so that everyone can access answers to questions
- The discussion forums will be monitored daily by instructors or teaching assistants

10. Office Hours:



- Office hours will be held remotely using Zoom.
- Instructors will post instructions for office hours on OWL as appropriate.

11. Resources



- All resources will be posted in OWL
- Required textbook: Kuby Immunology, 8th 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:



- 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
- 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.
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.

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 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](#).

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.

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

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)