

**Microbiology and Immunology
MicroImm 3620G – Immunology Laboratory**

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. A Personal Note from Dr. Summers and Dr. Kim

COVID-19 has created an unprecedented challenge to providing university education. This is especially true of a laboratory course such as MicroImm 3620G, which is heavily dependent on lab-generated data. Despite this, we decided to operate this course entirely online for three reasons:

- 1) the uncertainty of additional university closures caused by new waves of SARS-CoV-2,
- 2) some of you may have decided to not come to London so will be joining us remotely, and
- 3) it was unclear if we'd be able to sufficiently protect you while working in-lab

We realize that this loss of hands-on experience is not ideal, however, it should not impact the primary goals of this course – which is to train you to collect, analyze, interpret and communicate real-world scientific data. We have a vast library of data generated over the previous years of this course, allowing us to provide you with the same data-based experience as prior students.

We have made efforts to ensure that this course is as interactive as possible through synchronous (live video feed) lab sessions and discussion forums, while maintaining flexibility by offering all pre-lab course material in an asynchronous (recorded or available online) format.

All lab sessions are mandatory and live. Attendance will be taken.

Students will work online in small breakout groups with a TA and instructor present. You are expected to work collaboratively on the lab activities. Note that you will need an internet connection and a laptop or computer to engage in lab sessions. You will be expected to use your microphone during lab sessions, although a webcam is not mandatory.

We understand that learning remotely creates additional stresses above those normal for university students, and that you may have additional responsibilities or stressors due to life changes brought about by COVID-19. As such, we have tried to make this course as flexible as possible to ensure that you can manage the workload alongside your other courses, responsibilities, and while taking care of your mental health.

Availability: We will maintain an “open door policy” throughout the term, meaning you can email us at any time to arrange a virtual meeting to discuss course materials and issues. Primary contacts will be your TAs, Dr. Summers (ksummers@uwo.ca) and Dr. Kim (skim283@uwo.ca) can also be contacted by email. These meetings are private and remain confidential.

Privacy: While the TA and Instructors will appear on-camera during lab sessions, you are under no obligation to turn on your camera.

Accessibility: All lectures and lab videos will contain automatically generated captions to improve accessibility.

Accommodations: If you need accommodations beyond those offered above, please contact the Instructor and we will make alternative arrangements.

2. Technical Requirements:



Internet connection



Laptop or computer



Microphone



Optional: Webcam

3. Course Overview and Important Dates:



Delivery Mode*	Dates	Time
Pre-Lab Material: Asynchronous (pre-recorded). This includes lectures, lab videos, online learning modules, readings.	Materials will be available on OWL ~ 1 week prior to the lab.	
Online Labs: Synchronous (Small group discussions with TAs in live online breakout rooms)	Tuesdays or Wednesdays	2:30 PM – 5:20 PM

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

Winter Term Sessional Dates:

Classes Start	Reading Week	Classes End	Study day(s)	Exam Period
Jan 11	Feb 13 - 21	Apr 12	Apr 13	April 14 - 30

* March 15, 2021: Last day to drop a second-term half course or full course without academic penalty

4. Contact Information



Course Coordinator	Contact Information
Dr. Kelly Summers	Email: ksummers@uwo.ca Virtual Student Hours: As required, book by email.
Dr. Sung Kim	Email: skim283@uwo.ca Virtual Student Hours: As required, book by email.

You will be provided with your TA's name and contact information after the start of the course.

5. Course Description and Design

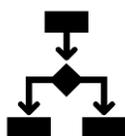
Over the course, students will:

- develop a working knowledge of common materials and methods widely used in immunological research and development in academia, industry and clinical testing.
- learn the proper methods for data collection, analysis and presentation
- gain advanced scientific communication skills (written, oral, laypersons)

This course runs parallel to and applies principles acquired in MicroImm 3300B.

Prerequisites: Biochemistry 2280A with a mark of at least 65%; Chemistry 2213A/B and 2223A/B with marks of at least 60% in both courses; Biology 2581A; MicroImm 2500A/B.

Pre- or Co-requisites: Microbiology and Immunology 3300B



Mode	Dates	Time	Frequency
Virtual synchronous lab	Tues/Wed	1-3 hours	weekly
Virtual asynchronous pre-lab materials	N/A	1-3 hours	weekly

- Asynchronous pre-work must be completed prior to the synchronous lab sessions.
- Attendance at synchronous sessions is required.
- Missed work must be completed and submitted within 48 hours.
- Closed captioning will be provided for video recordings.

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](#).

6. Student Expectations

- view all pre-lab material prior to the labs
- complete readings and watch videos associated with the lab
- complete and submit online assignments prior to the labs, when required
- attend and actively participate in all labs.
- ask questions on the owl forum when you require clarification
- participate respectfully in small or large group discussions
- communicate professionally when interacting with others
- *will not use your electronic devices for personal reasons during labs*
- carefully consider feedback before questions any grade
- complete assigned tasks on time
- maintain the ethical standards of a scientist

7. Course Expectations

1) Online Writing Modules:

The goal of each module is to improve your understanding of specific aspects of scientific and laypersons writing. There are *four* writing modules: Introduction, Abstract, Figures, Lay Summary. Each module comprises graded assignments/quizzes. Read the relevant section in the “Guide to Writing Hypothesis-Testing Papers” document prior to completing each module as it contains more comprehensive information and examples. *No late submissions will be accepted for any reason.*

2) Preparation, Participation and Professionalism:

During the labs, you will be working within a small group supervised by a TA. You are expected to complete all pre-lab activities prior to the lab, attend all labs, arrive to the lab on-time and prepared, work both independently and as part of a team and treat lab members with respect. This includes actively participating in formal and general discussions led by your TA, share ideas and experimental work with your lab group/TA/class, ask/answer knowledge-based (vs. clarification) questions, discuss science, M&I courses/modules, graduate studies, careers, etc. In addition, you are expected to submit post-lab assignments to your TA; these are based on the lab activities.

3) Written Assignments = Lab Reports and Lay Summary

A major learning outcome of this course is for you to gain *advanced scientific communication skills* to prepare you to write a 4th-year thesis, graduate thesis and primary scientific paper and to present science to the general public. Back up your work frequently on a USB key, One Drive, Google docs, etc. If your computer crashes or something happens to your document, you will NOT get an extension.

You will be provided with “Guidelines” for each lab report. You are encouraged to discuss the data and interpretations with your peers and TA prior to writing your reports, however **each student must write their lab report independently** (*i.e. in your own words*). Appropriate information must be cited and referenced. Academic dishonesty will not be tolerated.

Each student must also write their lay summary independently.

Submissions: Submit your written work as a **Word document** to OWL (Turnitin) by the due time.

You will have unlimited opportunities to submit your report through the “Turnitin Draft Checker” Assignment link. This will give you the opportunity to view the *Turnitin originality report* of your work and to make any necessary changes to your assignment prior to submission. The originality report should be 15% maximum, although plagiarism can still occur below this value (e.g. students who use the identical figure in their reports = *plagiarism*).

To understand the Turnitin originality report findings, I strongly encourage you to view the video at: <https://www.youtube.com/watch?v=oYxnvqEZKgs&feature=youtu.be> This video outlines what is shown in the Turnitin report and how to interpret all the information.

4) Peer Reviews:

Peer review is an essential aspect of manuscript and grant preparation as it often leads to significant improvement in the manuscript/grant. You will perform two peer reviews in this course: (1) figure, and (2) lay summary. Peer-to-peer review will be done anonymously using a software called ComPAIR.

The software randomizes peers and student work. Each student will be presented with 2 pairs of anonymous student’s work (e.g. lay summaries written by 2 peers) and you will be asked to **1)** compare and assess which student’s work is better, and **2)** provide constructive feedback (strengths, weaknesses and suggestions for improvement). You will be marked based on the *quality* of your constructive feedback (*i.e. how clear, meaningful, actionable, impactful, etc. it is to enhance your peer’s writing skills*).

8. Course Content and Schedule



A Schedule with all lecture and lab topics, assignment due dates, and other scheduling information can be found as a link in the “Syllabus” tab on the Microlmm 3620 OWL site.

9. Online Participation and Engagement



- Students are expected to participate and engage with content and discussion as much as possible.
- Students can participate during live lab sessions and post on the course forum after watching recordings.
- Students can also participate by interacting in the forums with their peers and instructors.

10. Communication:



- Students should check the OWL site every 24 – 48 hours.
- Emails will be monitored daily; students will receive a response in 24 – 48 hours.
- Zoom will be used for all synchronous sessions.
- 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.

11. 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.

12. Evaluations

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

Assessment	Format	Weighting	Due Date
Preparation, participation, professionalism	N/A	10%	N/A
<i>online</i> Writing Modules:	Figures	3%	Jan 19 @ 2:30 pm
	Abstract	2%	Jan 26 @ 2:30 pm
	Introduction	3%	Feb 2 @ 2:30 pm
	Lay Summary	7%	Final lay summary due Mar 23 @ 2:30 pm
Lab Report 1	Full Scientific Paper	15%	Feb 26 @ 11:55pm
Lab Report 2	Full Scientific Paper	30%	April 9 @ 11:55pm
Video	Oral Scientific Communication in Laypersons terms	15%	Post video Mar 29 @ 6 pm
		5%	Post/answer questions
Peer Review	Figure	5%	Submit by Feb 1 @ 11:55pm Peer reviews due Feb 5 @ 11:55pm
	Lay Summary	5%	Submit by Mar 16 @ 2:30pm Peer reviews due Mar 19 @ 11:55pm



- Written assignments will be submitted to Turnitin (statement in policies below).
- Students will have unlimited submissions to Turnitin.
- 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:

- Late assessments without illness self-reports will be subject to a late penalty 25% if less than 24 hours late, 50% if 24 to 48 hours late, and a grade of 0% if more than 48 hours late.
- Late assessments with illness self-reports should be submitted within 48 hours of submission of the illness self-report. If you require more time, contact the Instructor after submitting your self-report.
- There are no midterm or final exams in this course.

Course policy on Make-up Evaluations:

Late submissions will not be accepted for any reason for the Online Writing Module Assignments/Quizzes and Peer Reviews.

Self-reported absences will only be accepted for lab reports. These will be due 72-hours after self-reporting (*i.e. 24-hours after expiration of the self-report*).

Medical or non-medical absences approved by an Academic Counsellor:

- **is required for missing a lab**
- rescheduling of work will occur in accordance with the recommendation of the counsellor, plus the student and instructor's availability.

Penalties if work is missed/late with no approved reason:

- *Lab Reports:* Late penalty is 25% per day. It will not be accepted after 2-days late and you will get a mark of zero.

- *Missed Lab:* Penalty for an *unexcused* absence is 5% deducted from the final grade for each lab missed. Absence *without penalty* will only be given to students with reasons approved by an Academic Counsellor.

13. Student (Office) Hours:



- Student hours will be held remotely using Zoom, with these meetings booked via email.

14. Resources



- All lecture slides, videos and other lecture materials will be posted in OWL.
- All lab videos, lab manual chapters, data sets and write-up instructions will be posted in OWL.
- All materials are provided free-of-cost. There is no textbook to purchase for this course.

15. 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 the first lecture
- All recorded sessions will remain within the course site or unlisted if streamed

16. Science Students' Donation Fund:

We greatly appreciate the generous donations from the Science Student Donation Fund to support this course. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine & Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing paperwork in the Faculty of Science Dean's Office.

For further information on the process of awarding grants from the Fund or how these grants have benefited undergraduate education in this course, consult the instructor of the course, chair of your department or email the Science Students' Council: ssc@uwo.ca

17. Western Academic Policies and Statements

Absence from Course Commitments

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

In the interest of the health and safety of students and health care providers, you are no longer required to seek a medical note for absences this term. If you are unable to meet a course requirement due to illness you should use the [Illness Reporting Tool](#). This tool takes the place of the need to submit a medical note and the Self-Reported Absence System formally used by undergraduate students.

You are required to self-report every day that you are ill and unable to complete course commitments. Details about when you should submit missed work, the format of the missed work can be found in the Section 7. Evaluation above. Students should communicate promptly with their instructor and use this tool with integrity.

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](#).

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](#).

18. 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.

19. 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](#)