MICROBIOLOGY 212 (2022W_T1)
INTRODUCTORY MEDICAL MICROBIOLOGY AND IMMUNOLOGY.

GENERAL INFORMATION

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom.

UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (https://senate.ubc.ca/policies-resources-support-student-success)

Calendar Description:

Innate and adaptive immune responses to bacterial and viral pathogens, autoimmunity, allergies and graft rejection; virus structure, replication cycles, pathogenesis and vaccines; data analysis of foundational immunology and virology experiments. Prerequisite: One of BIOL112, BIOL200, BMEG245, SCIENCE 1.

Instructors:

Dr. L. Osborne, losborne@mail.ubc.ca
Dr. T. Kion, tkion@mail.ubc.ca (Course Coordinator)

Teaching Assistants:

Ginny Picher
Ekroop Sohal

Instructor and TA virtual office hour times to be announced on Canvas. All meetings will be online. A Piazza discussion board will also be available.

If emailing instructors, please remember to put MICB212 in the subject heading and include your student number.

Course format:

MICB212 will be taught in-person in WOOD 2.

Tutorials/Workshops will be done via Zoom. See Canvas for the schedule. Tutorials/Workshops are not mandatory, but are highly recommended.

Covid Safety in the Classroom (information may change as the term progresses):

i. **Masks**: Masks are no longer required for all indoor public spaces on campus, including classrooms, however, Omicron is surging and new variants arising, summer term is short and it is hard to catch up if you are off sick. For these reasons, "masks are strongly recommended in this classroom". The term "masks" refers to medical and non-medical masks that cover our noses and mouths. Masks are a primary tool to make it harder for Covid-19 to find a new host. You will need to wear a medical or non-medical mask for the duration of our class meetings, for your own protection, and the safety and comfort of everyone else in the class. You may be asked to remove your mask briefly for an ID check for an exam, but otherwise, your mask should cover your nose and mouth. Please do not eat in class. If you need to drink water/coffee/tea/*etc*, please keep your mask on between sips.

Mask wearing protects you as well as others in your environment. Let's do everything we can as a community to stop the spread of this virus.

ii. Vaccination: If you have not yet had a chance to get vaccinated against Covid-19, vaccines are available to you, free, and on campus. The higher the rate of vaccination in our community overall, the lower the chance of spreading this virus. You are an important part of the UBC community. Please arrange to get vaccinated if you have not already done so.

iii. Seating in class: To reduce the risk of Covid transmission, please sit in a consistent area of the classroom each day. This will minimize your contacts and will still allow for the pedagogical methods planned for this class to help your learning.

Your personal health:

If you're sick, it's important that you stay home – no matter what you think you may be sick with (*e.g.*, cold, flu, other).

- A daily self-health assessment should be completed before attending campus. Every day, before coming to class, complete the self-assessment for Covid symptoms using this tool: https://bc.thrive.health/covid19/en (this is also posted on the MICB212 Canvas Homepage.
- Do not come to class if you have Covid symptoms, have recently tested positive for Covid, or are required to quarantine. You can check this website to find out if you should self-isolate or self-monitor: http://www.bccdc.ca/health-info/diseases-conditions/covid-19/self-isolation#Who.

Your precautions will help reduce risk and keep everyone safer. In this class, the marking scheme is intended to provide flexibility so that you can prioritize your health and still be able to succeed

Do not come to class if you are sick, have Covid symptoms, have recently tested positive for Covid, or are required to quarantine. This precaution will help reduce risk and keep everyone safer. In fact, it is part of the Student Code of Conduct: https://students.ubc.ca/campus-life/student-code-conduct In this class, the marking scheme is intended to provide flexibility so that you can prioritize your health and still be able to succeed. See the **Grade Distribution** section for more detail.

If you do miss class because of illness:

- Make a connection early in the term to another student or a group of students in the class. You can help each other by sharing notes. If you don't yet know anyone in the class, post on the discussion forum to connect with other students.
- Consult the class resources on Canvas. We will post the readings and PowerPoint slides for each class day.
- Use the discussion forum for help
- Come to office hours (they're online, so you can join from anywhere).
- See the marking scheme for reassurance about what flexibility you have.
- If you are concerned that you will need to miss a particular key activity due to illness, contact us to discuss. Also fill out this online request form for academic concession. https://ubc.ca1.qualtrics.com/jfe/form/SV_8cvEls27xMrbtno

The following is based on the assumption that we will be writing in person exams. If this changes, students will be notified on Canvas.

If you are sick on a midterm exam day, please email the instructor as soon as you are confident you should not come to the scheduled exam. We would strongly prefer that you contact us to make an alternate arrangement than for you to come to the exam while you are ill. If you do show up for an exam and you are clearly ill, you will be asked to leave and we will make alternate arrangements with you. It is much better for you to email ahead of time and not attend. Also fill out this online request form for academic concession. https://ubc.ca1.qualtrics.com/jfe/form/SV_8cvEls27xMrbtno

If you are sick on a final exam day, do not attend the exam. You must apply for deferred standing (an academic concession) through Science Advising no later than 48 hours after the missed final exam/assignment. Students who are granted deferred standing write the final exam/assignment at a later date. Learn more and find the application online: https://science.ubc.ca/students/advising/concession

For additional information about academic concessions, see the UBC policy here: http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0

Instructor Health:

If the instructor is sick: We will do our best to stay well, but if we become ill, develop Covid symptoms, or test positive for Covid, then we will not come to class. If that happens, here's what you can expect:

- If we are well enough to teach, but are taking precautions to avoid infecting others, we may have an online session or two. If this happens, you will receive an email telling you how to join the class (the information will also be posted on Canvas). You can anticipate that this

would very likely be a last-minute email. Our classroom will still be available for you to sit and attend an online session, in this (hopefully rare) instance.

- If we are not well enough to teach, the lecture will be delivered by another faculty member.

Course Reading Package:

The MICB212 Course Reading Package has been moved online to Canvas. Each page in the immunology & virology segments have images, links to animations/videos, review questions and a self-assessment quiz. Students can copy and paste the notes into their own documents and annotate them as appropriate.

Unless indicated on Canvas, all of the material in the MICB212 Course Reading Package is required reading and can be the subject of exam questions, even if not covered during the lecture periods.

Copyright:

All materials of this course (course handouts, lecture slides, assessments, course readings, *etc*.) are the intellectual property of the Course Instructor or licensed to be used in this course by the copyright owner. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline.

Course Web Site:

The MICB212 Canvas Site will be used as an important learning resource. Learning objectives, lecture materials, review questions, practice exams and links to site containing relevant animations are posted. Students can access this site at **canvas.ubc.ca** using their Campus Wide Login. Material posted in instructors' slides is also considered testable. Further clarification will be provided in lectures.

All of the material on the Canvas site is the intellectual property of the instructors. Posting the course materials to another site – *e.g*., Discord, Facebook, Chegg – constitutes a violation of copyright and is considered to be non-academic misconduct. Please do not re-distribute course materials.

Learning objectives:

At the end of the course, the students will have a general understanding of the different types of disease-causing pathogens and how they try to evade the body's immune system. The students will also have a basic understanding of the different ways in which the immune system fights microbial disease. Students will also learn about the diversity of virus pathogens and explore the replication strategies of a few important virus pathogens, and how they exploit host cells to replicate. Students will also gain a basic understanding of the use of vaccines and monoclonal antibodies.

MICB212 strives to reinforce and illustrate concepts in cell biology, molecular biology and biochemistry that students have been exposed to in BIOL200 and BIOL201. It also prepares students for more advanced courses in Microbiology, Immunology, Cell Biology and Biochemistry.

The course emphasizes a conceptual understanding of the cells and molecules involved in these processes and also seeks to connect these to real life examples that the students are familiar with. Where appropriate, quantitative skills are emphasized.

Course schedule:

Sept. 7 – first meeting of MICB212
Sept. 30 – UBC closed, National Day of Truth and Reconciliation
Oct. 5 – Exam #1
Oct. 10 – UBC closed, Thanksgiving Holiday
Nov. 8 – Exam #2
Nov. 9 – Nov. 11 – no classes, Reading break and Remembrance Day
Dec. 7 – last meeting of MICB212

iClicker Cloud:

UBC has provided a subscription to iClicker Cloud for all students. iClicker Cloud will work similar to the iClicker system that you have used in the classrooms, but you'll use your phone or tablet to answer questions. A student guide to iClicker Cloud can be found here https://lthub.ubc.ca/guides/iclicker-cloud-student-guide/ (this link is also on Canvas).

iClickers may be used in class, but they are not used as part of the course grades. Participation in iClicker questions is encouraged but is not mandatory.

Grade Distribution:

Exam #1 – 25%
Exam #2 – 25%
Exam #3 – 25%
Assignments – 25% (There will be six assignments, the best five will be used towards the grade)

Students must have a passing average on the three exams in order to pass the course.

- The grading scheme is final and will **NOT** be changed. MICB212 grades are **NOT** scaled.

Assignments:

Throughout the term, you will be required to complete several assignments that will contribute to your course grade. The assignments may consist of a variety of questions including: fill-in-the-blanks, multiple-choice, short answer and data analysis questions. The assignments will be set up on Canvas using the quiz tool. Students are required to work individually on the assignments.

Final Exam:

Instructors cannot rearrange the date and time for students to write the final examination because of employment or travel conflicts *etc*. Students that are absent during the final exam must report to the Dean's Office as soon as possible and request a form for a Deferred Exam. The Dean's office will require valid documentation to explain your absence from an exam.

The exam period is set for Sunday Dec. 11th – Thursday Dec. 22nd, 2022 inclusive. Exams are scheduled for 7 days a week (*i.e.,* exams can be on Sunday).

Missed Final Exams: Students that are absent during the final exam must report to the Dean's Office as soon as possible and request a form for a Deferred Exams. The Dean's office will require valid documentation to explain your absence from an exam. Deferred Exams are scheduled by the Enrolment Services and are usually held during the term 2 exam session.

Note that instructors are not permitted to rearrange the times of final exams for students other than in a case of exam hardship. An exam hardship is defined as 3 exams within a 24-hour period. For example, Student "A" has an exam at 8:30 am, 12:00 noon and 7 pm; this is an exam hardship and the 2nd exam would be rescheduled (probably to the following day). An example of what is **NOT** an exam hardship: Student "B" has exams scheduled at 8 am, 12:00 noon, then 8 am the following day. The third exam is in the next 24-hour period.

Final Examination Questions Format:

- Exam questions will be multiple-choice format.
- The subject of most of the exam questions will be drawn from material in the Canvas pages. Some of the exam questions may be based on material covered by your instructor in class (for example, a disease outbreak not included in the Canvas pages) - the number of questions would reflect the amount of time discussed in class.
- Some parts of the Canvas pages may not be explicitly dealt with during class time; nevertheless, students are still responsible for this material for exam purposes.
- Many exam questions will involve problem solving. You will need to integrate multiple concepts from different portions of a given segment (*e.g.*, how would antibodies work act on viruses or bacteria).
- Students are required to produce one piece of photo-identification during the exams. UBC Student ID is preferable.

Student Responsibilities:

Students are responsible for:

- **Confirming their registration in the course.**
- Maintaining an active email address that is registered with the University for the purpose of communicating with the instructors, the Dean of Science, and Enrolment Services.

- Consulting the MICB212 Canvas site on a regular basis for announcements and other posted information.
- Classroom and/or online discussion should be civilized and respectful to everyone and relevant to the topic we are discussing. Any discussion from class that continues on Canvas or Piazza should adhere to these same rules and expectations.

Tutoring:

Many private companies will offer tutoring services to students enrolled in courses at UBC, often for an hourly fee. The instructors of MICB212 do not support or endorse any of these services. The employees of these companies have had no contact or discussions with the instructors and **are not** provided with any of the course materials. Students are directed to use caution if hiring any of these companies. Appeals that the course grade was lower than expected because of incorrect information provided by these companies will not be accepted.

Supporting Learning with Academic Integrity (adapted from Dr. C. Rawn, Dept. of Psychology, UBC):

In the academic community – a community of which you are now a part – we deal in ideas. That's our currency, our way of advancing knowledge. By representing our own and others' contributions in an honest way, we are (1) respecting the rules of this academic community, and (2) showcasing how our own novel ideas are distinct from but relate to their ideas. This gives us a formal way to indicate where our ideas end and where others' begin.

But academic integrity goes well beyond formal citation. **Welcome to the academic community. You are expected to act honestly and ethically in all your academic activities, just like the rest of us.**

Make sure you understand UBC's definitions of **academic misconduct, consequences**, and expectation that students must clarify how **academic honesty** applies for a given assignment. *Please ask if you're not sure.* http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,959
(While you're checking out the calendar, you might want to check out the "**Student Declaration and Responsibility**" statement you agreed to when you registered.
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,285,0,0#15613

What does academic integrity look like in MICB212?

At any time: if you are unsure if a certain type of assistance is authorized, please ask. If you have a need that is unmet by existing course materials, course structure, and/or our learning community members, please ask.

DO your own work. All individual work that you submit should be completed by you and submitted by you. All assessments, large and small, are designed to help you learn and understand the concepts in the course and apply your knowledge to solve problems.

- It is *unacceptable* to buy/sell/swap/share assignment questions or answers on any platform.

- It is *unacceptable* to misrepresent your identity by using someone else to complete any

portion of a course (*e.g.,* comment on a discussion board, complete a quiz question).

- It is *unacceptable* to help someone else cheat.

- It is *unacceptable* to copy answers from the course notes.

AVOID collusion. Collusion is a form of academic integrity violation that involves working too closely together *without authorization*, such that the resulting submitted work gains unfair advantage over other students because it is a measurement of the *group/pair/others'* understanding rather than the *individual* understanding. For example, collusion on an open book assignment or test includes working together to write answers or answering someone else's question in any forum. Assignments that are explicitly the product of group collaboration *have authorization*, so don't count as collusion.

Preparing to individually complete an assignment or test by studying together (*e.g*., discussing concepts, quizzing each other and giving feedback on each others' answers) doesn't count as collusion. In this course, **your assignments and tests must be *individually written*.**

Can I work with a classmate to co-create study notes? Yes, you can create your own original collaborative notes, but it is *unacceptable* to post them on file-sharing websites (*e.g*., CourseHero, GoogleDocs). I recommend using the features in Canvas groups to ensure your work remains protected. Send me a message using Canvas Inbox, and I'll create a Group just for you. That will allow you to upload and share notes, and to work collaboratively on Pages (see this site for an introduction to these features). I also recommend starting your collaboration with a written agreement that addresses integrity issues, such as these: *Who else can see/use/contribute to these notes? How will we ensure we are not violating copyright?*

DO NOT share materials provided for you to use in this course. We are working hard to provide all the materials you need to succeed in this course. In return, please respect our work. All assignment instructions, quiz questions and answers, discussion questions, announcements, PowerPoint slides, audio/video recordings, Canvas modules, and any other materials provided to you by the Teaching Team are for use in this course by students currently enrolled in MICB212 section 101.

- It is *unacceptable* to share any of these materials beyond our course, including by posting on file-sharing websites (*e.g*., CourseHero, GoogleDocs).

- It is *unacceptable* to copy and paste sentences from the textbook (*e.g*., definitions) into for-profit software (*e.g*., Quizlet) for use in studying. Respect the Teaching Team and textbook authors' intellectual property, and follow copyright law.

Reach Out for Success:

University students often encounter setbacks from time to time that can impact academic performance. Discuss your situation with your instructor or an academic advisor. Learn about how you can plan for success at: **www.students.ubc.ca**.

For help addressing mental or physical health concerns, including seeing a UBC counsellor or doctor, visit: **www.students.ubc.ca/livewelllearnwell**.