MBIO 1220: Essentials of Microbiology
Winter 2021 (January 18-April 16, 2021) Remote

Section A01
11:30-12:20 M/W/F

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Office hours: Please email me to make appointments for virtual zoom meetings.
Web Site: UMLearn (https://universityofmanitoba.desire2learn.com/d2l/login)
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Course Description
An Introduction to the essential principles of microbiology and immunity, with emphasis on microbial diseases.

Textbook
Recommended E-text or hardcopy textbook: Nester's Microbiology: A Human Perspective. Anderson, Salm & Allen, 9th edition. Your E-textbook or hardcopy textbooks is available for purchase from the UofM Bookstore online:

For E-Textbook use the link below:

https://www.campusebookstore.com/integration/AccessCodes/default.aspx?bookseller_id=33&Course=MBIO+1220&frame=YES&t=permalink

To access your E-textbook:

1. Go to the Connect course URL: https://connect.mheducation.com/class/c-selin-winter2021

2. Enter your **school email address** and complete the brief online registration form that follows.

3. You have three registration options:

   - **Connect Code:** Enter your **Connect access code** and click ***REDEEM***.
   - **Purchase Online:** Click ***BUY IT*** to use a credit card or PayPal.
   - **Temporary Access:** Click ***ACCESS NOW*** for FREE, two-week access.

For a physical copy of the textbook click the link below:

http://bookstore.umanitoba.ca/SelectTermDept
Once you have clicked the link—select Microbiology – MBIO 1220 A01

Technology requirements for MBIO 1220 RL

Students enrolled in this course must ensure they satisfy the following minimum technological requirements:

1. A computing device where one can create and edit documents,

2. An internet connection capable of streaming videos and downloading software, and

3. Access to a web-cam and microphone.

Course material in relation to textbook:

MBIO 1220 Course topics*	**Textbook chapters**
Part 1: The Life and Death of Microorganisms	**Anderson 9th ed.**
• Humans and the Microbial World	1
• The Molecules of Life	2
• Microscopy and Cell Structure	3
• Dynamics of Microbial Growth	4
• Control of Microbial Growth	5
• Microbial Metabolism: Fueling Cell Growth	6
• The Blueprint of Life and Bacterial Genetics	7, 8
Part 2: Microorganisms and Humans	
• Viruses, Viroids and Prions	13
• The Innate Immune Response	14
• The Adaptive Immune Response	15
• Host-Microbe Interactions	16
Immunologic Disorders	17
• Applications of Immune Responses	18
• Epidemiology	19
• Antimicrobial Medications	20
Part 3: Infectious Diseases	
• Respiratory System Infections	21
• Skin Infections	22, 23
• Digestive System Infections	24
• Blood and Lymphatic Infections	23, 25
• Nervous System Infections	26
• Genitourinary Tract Infections	27

* Some topics may not be covered due to time constraints.

Course Lectures and Zoom meeting Schedule

The schedule below outlines the dates you are expected to listen to your lectures and attend live zoom lectures. There will be a live zoom lecture once a week and a link to join the live zoom lecture will be sent out the day before the lecture via email and posted on UMlearn course page. All lecture ppt notes are available on UMLearn so that you can print prior to your lecture. All pre-recorded lectures are accessed on UMlearn under the content tab in the Lecture section and can be watched as powerpoint or as a YouTube video. If you are unable to make a zoom meeting, all live zoom lectures will be recorded and posted on UMLearn in the Lecture section under the content tab. <u>Please note that with remote learning the lectures may take longer than the set 50 minutes that is scheduled.</u>

Online Lecture and Zoom Meeting Schedule:

Date	Lecture UMLearn	Zoom meetings
Mon. Jan 18	Introduction to course	Zoom lecture: 11:30 – 12:20 (Central Time)
Wed. Jan 20	Chapter 1: Introduction to Microbiology and Humans and the Microbial world	
Fri. Jan 22	Chapter 2: Chemical Principles	
Mon. Jan 25	Chapter 3: Microscopy and Cell Structure	
Wed. Jan 27	Chapter 4: Microbial growth	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. Jan 29	Chapter 5: Control of Microbial growth	
Mon. Feb 1	Chapter 6: Microbial metabolism	
Wed. Feb 3	Chapter 7: The blueprint of life: DNA to protein	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. Feb 5	Chapter 8 Microbial Genetics	
Mon. Feb 8	Study period no lecture	

Wed. Feb 10	Study period no lecture	
Fri. Feb 12	**Midterm 1 (Chapter 1-7) Open Book**	UMLearn 11:30 AM -12:30 PM (1 hour)
Feb 15-19	Winter Break	
Mon. Feb 22	Chapter 13 Viruses, Viroids and Prions	
Wed. Feb 24	Chapter 14: The innate immune response	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. Feb 26	Chapter 15: The adaptive immune response	
Mon. March 1	Chapter 16: Host-Microbe interactions	
Wed. March 3	Chapter 17: Immunological disorders	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. March 5	Chapter 18: Application of Immune response	
Mon. March 8	Study period	
Wed. March 10	Study period	
Fri. March 12	**Midterm #2 (Chapter 8, 13-18) Open Book**	UMLearn 11:30 AM -12:30 PM (1 hour)
Mon. March 15	Chapter 19: Epidemiology	

Wed. March 17	Chapter 20: Antimicrobial medications	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. March 19	Chapter 21: Respiratory infections	
Mon March 22	Chapter 22: Skin Infections	
Wed. March 24	Chapter 24: Digestive System Infections	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. March 26	Chapter 25: Blood and Lymphatic system Infections	
Mon. March 29	Chapter 26: Nervous system Infections	
Wed. March 31	Chapter 27: Diseases of the Urinary and Reproductive system	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. April 2	Good Friday no class	
Mon. April 5	Easter Monday no class (not an actual holiday but thought you may need an extra day)	
Wed. April 7	Question period on zoom	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
Fri. April 9	Question period on zoom	Zoom lecture: 11:30 AM – 12:20 PM (Central Time)
April 12-16	Study week	
April 19-May 1	**FINAL EXAM PERIOD (Covers all material Chapter 1-8, Chapter 13-22, Chapter 24-27)**	2 hour exam

Please note that the live zoom lecture schedule is not written in stone and may change as the semester moves along. You will be notified via email of any changes and an updated schedule will be provided.

Course Evaluation

Tentative examination schedule:

Midterm test 1	25%	During the regular class period, UMLearn Friday Feb 12 (11:30AM - 12:30 PM Central Time)
Midterm test 2	25%	During the regular class period, UMLearn Friday March 12 (11:30 AM - 12:30 PM Central Time).
Final exam	50%	April 19- May 1, ONLINE but will be scheduled by the Registrar's office.

Midterm format: Multiple choice type questions. There will be 40 questions for each Midterm with one hour to complete the exam and will be open book.

Final Exam format: Multiple choice type questions. There will be 80 questions and you will be given 2 hours to complete the exam. The final exam will be open book.

OPEN BOOK MEANS - you are free to use your course notes during midterms and final Exam. You may use an online search tool—however no chat groups or Apps where groups can share information will be permitted. During this course it is expected that you work alone and that the exams are done by you and only you—sharing of information among students during an exam is considered academic misconduct and will result in an automatic fail in the course.

Course Grading and Examinations

Letter grades will be assigned by taking into consideration the grade distribution in the class and the University of Manitoba's descriptors: A^+ (Outstanding), A (Excellent), B^+ (Very Good), B (Good), C^+ (Satisfactory), C (Adequate), D (Marginal), F(Failure)
http://umanitoba.ca/student/records/grades/686.html.

The goal is to provide grades that represent performance in the context of the class; the grades will not be curved to meet an expected distribution, but conversion of percentages to letter grades will be at the discretion of the instructors.

For this course, **a grade of 45% on the final exam is required to pass the class**. The grading scheme generally, but not always, will be close to the following: A^+ (>90%), A (80-89.9%), B^+ (75-79.9%), B (70-74.9%), C^+ (65-69.9%), C (60.0-64.9%), D (50-59.9%), F (<50% total, or <45% in final exam).

Note that grades received from both Midterms will be visible on UMLearn prior to the **voluntary withdrawal date** (March 31, 2021).

Deferred Midterms and Final

A deferred midterm may be permitted if there is a legitimate reason for missing your midterm—**however, you must email me to discuss and be approved prior to the midterm otherwise it will result in the automatic transfer of the 25% to your final exam**. Please note that missing both midterms will result in automatic failure of the course. The **Final examination** will be comprehensive (i.e., cover all lectures), and will be scheduled by Student Records during the Winter examination period (April 19 – May 1). **Permission to write a deferred final exam is granted by your Faculty - the instructor is not**

involved in this process. If it is necessary for you to write your final exam at an alternate date, you must visit your Faculty office with appropriate documentation to request permission for a deferred exam. This is a **strict** university policy, and there are no exceptions. If a deferral is granted it is your responsibility to contact the instructor as soon as possible for the date of the deferred exam.

As per University of Manitoba policies, students are not permitted to access any unauthorized materials during an examination. This includes but is not limited to books, notes, or any electronic device capable of wireless communication and/or storing information.

Students with disabilities are directed to Student Accessibility Services to facilitate the implementation of accommodations. Course instructors are willing to meet with Students to discuss the accommodations recommended by Student Accessibility Services.

Student Responsibilities

It is your responsibility to make sure that all eligibility requirements are met to be registered in this class. This means:

- You have taken the appropriate prerequisites, as noted by the calendar description, or have permission from the instructor to waive these prerequisites.
- You have not previously taken, and are not concurrently registered in this course and another that has been identified as "not to be held with".
- Students who have previously obtained credit in, or are currently taking MBIO 1010 or MBIO 1011, must obtain departmental approval to be registered in this course (MBIO 1220).

Academic honesty guidelines are stated in your calendar regarding University policy with respect to academic dishonesty (particularly plagiarism and cheating) and behaviour and absence from final exams. All work is to be completed independently unless otherwise specified. Please remember that group projects are subject to the rules of academic dishonesty and every group member must ensure that a group project adheres to the principles of academic integrity.

The Faculty of Science web page has detailed information https://sci.umanitoba.ca/students/undergraduate-students/academic-resources/academic-integrity-2) Please read and follow these guidelines, and ask if you have any questions.

Respectful Work and Learning Environment Policy

We recognize that these are unusual circumstances, and that there are some adjustments needed when working virtually. At the same time, we do want to remind you that University policies, such as the Respectful Work and Learning Environment policy, still apply, as do basic expectations around how you engage with each other, and with the University. **This means that when participating in classes, online meetings, etc., you are expected to behave professionally, and follow the same basic norms as you would in person, such as being clothed, not being impaired, and participating** respectfully. Essentially**, if you wouldn't do it in an in-person class, don't do it in virtual setting.**