**MBIO 1220: Essentials of Microbiology**

**Fall 2018**

***Section A01***

10:00 – 11:15 Tuesday and Thursday, Room 290 Education Building

**Instructor**: Dr. Carrie Selin **Email**: carrie.selin@umanitoba.ca

**Office**: N/A **Phone:** 204-794-3900

**Office hours:** Available for questions after class. Other times are available by appointment.

***Course Description***

An Introduction to the essential principles of microbiology and immunity, with emphasis on microbial diseases.

***Textbook***

**Recommended text**: Microbiology: A Human Perspective. 8th ed. Nester, Anderson and Roberts. McGraw-Hill. (Note: older editions of the textbook are acceptable.)

The following text can be used as an alternative:Microbiology: An Introduction 11th Edition. Tortora, Funke and Case. Pearson.

***Course Evaluation***

**Tentative examination schedule:**

Midterm test 1 25% During the regular class period, Thursday, October 4th.

Will cover up lectures up to Oct. 2nd

Midterm test 2 25% During the regular class period, Thursday, November 8th.

Cover the next 8 to 9 lectures (non-cumulative)

Final exam 50% December, scheduled by the Registrar’s office.

Cumulative

**Exam format**: Multiple choice. **The final exam will be cumulative**. Electronic devices, including translators are not permitted.

**There will be no deferred midterm exams**. A medical certificate must be presented within one week of a missed exam. Upon receipt of the medical certificate the final exam will be pro-rated to 75%. **No extra provisions will be made if both midterm exams are missed, ie. there will be no 100% final exams for those who miss both midterm exams. The maximum for the final will be 75%.**

***Course Lecture Notes***

Lecture notes and additional course information can be found on the course UM Learn site: ([www.umanitoba.ca/umlearn](http://www.umanitoba.ca/umlearn)). You will need your UMNet Id and password to login.

It is your responsibility to access the lectures and bring them to class. You will be responsible for what is written in the prepared slides, **as well as what transpires in class**. The lecture notes available on UM Learn do not represent the entire course material. **It is your responsibility to attend class and take notes on any additional material presented.**

***MBIO 1220 Course topics\**** **Textbook chapters**

**Part 1: The Life and Death of Microorganisms Nester 8th ed.** **Tortora 11th ed.**

* Humans and the Microbial World 1 1
* The Molecules of Life 2 2
* Microscopy and Cell Structure 3 3, 4
* Dynamics of Microbial Growth 4 6
* Control of Microbial Growth 5 7
* Microbial Metabolism: Fueling Cell Growth 6 5
* The Blueprint of Life and Bacterial Genetics 7, 8 8

**Part 2: Microorganisms and Humans**

* Viruses, Viroids and Prions 13 13
* The Innate Immune Response 14 16
* The Adaptive Immune Response 15 17
* Host-Microbe Interactions 16 15
* Immunologic Disorders 17 19
* Applications of Immune Responses 18 18
* Epidemiology 19 14
* Antimicrobial Medications 20 20

**Part 3: Infectious Diseases**

* Respiratory System Infections 21 24
* Skin Infections 22, 23 21
* Digestive System Infections 24 25
* Blood and Lymphatic Infections 23, 25 23
* Nervous System Infections 26 22
* Genitourinary Tract Infections 27 26

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

***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).

**It is your responsibility to make sure you understand the rules regarding cheating and plagiarism at the University of Manitoba.**

* Read the Faculty of Science Statement on Academic Dishonesty (can be found on the last page of this document)
* Refer to the student discipline bylaw and academic integrity information in the University of Manitoba Academic calendar: (<http://umanitoba.ca/calendar>)
* Read statements on academic dishonesty, including plagiarism, cheating and examination impersonation found on the Faculty of Science webpages:

(<http://umanitoba.ca/faculties/science/undergrad/resources/webdisciplinedocuments.html>).

* **In cases of cheating during examinations, the test in question will be given a grade of 0% and the student will be reported to the appropriate authorities for disciplinary action.**

**Please note:** The department of Microbiology does **not** have a fixed grading scale. The grading scale presented below is **tentative** and may be adjusted based on overall class performance.

|  |  |  |
| --- | --- | --- |
| **Letter grade** | **Percentage range** | **Description** |
| A+  A  B+  B  C+  C  D  F | 90 – 100  80 – 89  75 – 79  68 – 74  63 – 67  55 – 62  45 – 54  less than 45 | Exceptional  Excellent  Very good  Good  Satisfactory  Adequate  Marginal  Failure |

**Faculty of Science Statement on Academic Dishonesty**

The Faculty of Science and The University of Manitoba regard acts of academic dishonesty in quizzes, tests, examinations, laboratory reports or assignments as serious offences and may assess a variety of penalties depending on the nature of the offence.

Acts of academic dishonesty include, but are not limited to bringing unauthorized materials into a test or exam, copying from another individual, using answers provided by tutors, plagiarism, and examination personation.

***Note: cell phones, pagers, PDAs, MP3 units or electronic translators are explicitly listed as unauthorized materials, and must not be present during tests or examinations.***

Penalties that may apply, as provided for under the University of Manitoba's Student Discipline By-Law, range from a grade of zero for the assignment or examination, failure in the course, to expulsion from the University. The Student Discipline By-Law may be accessed at:

<http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html>

Suggested minimum penalties assessed by the Faculty of Science for acts of academic dishonesty are available on the Faculty of Science web-page: <http://umanitoba.ca/faculties/science/resources/Acad_Dishon_TABLE_RevCSS_AdminC_Jul2012_WEB.pdf>

All Faculty members (and their teaching assistants) have been instructed to be vigilant and report all incidents of academic dishonesty to the Head of the Department.