



DEPARTMENT of SCIENCE
COURSE OUTLINE – Winter 2020

MI1330 (A3/B3): Medical Microbiology for Health Care Professionals – 3 (3-0-0) 45 Hours for 15 Weeks

INSTRUCTOR: Dr. Sean Irwin, Ph.D. **PHONE:** (780) 539-2860
OFFICE: J224 **E-MAIL:** sirwin@gprc.ab.ca
OFFICE HOURS: Tues. and Thurs. 1 – 2:30 pm or by appointment

CALENDAR DESCRIPTION:

Introductory course in medical microbiology designed for students enrolled in health care related programs. This course begins with basic information on microorganisms (bacteria, viruses, fungi, parasites and prions), the immune system, infection control, transmission of infection, epidemiology, antimicrobials, disinfection and sterilization. The later part of the course concentrates on infectious diseases caused by pathogenic microorganisms.

Notes: Restricted to Nursing students.

PREREQUISITE(S)/COREQUISITE: Biology 30 and Chemistry 30 or equivalents.

REQUIRED TEXT/RESOURCE MATERIALS:

Totora, G.J. et al., Microbiology: An Introduction (13thed.), Pearson Education, Inc., San Francisco, CA, 2019.

DELIVERY MODE(S): Lectures: A3 - Monday and Wednesday 8:30 – 9:50 pm, J202
B3 - Tuesday and Thursday 8:30 – 9:50 pm, J202

COURSE OBJECTIVES:

1. To gain an understanding of microbe structure and function.
2. To gain a knowledge of human infectious diseases and how they are transmitted.
3. To gain an understanding of human infectious disease that will facilitate future work in the medical field.
4. To develop critical thinking skills with respect to infectious diseases of the human body.

LEARNING OUTCOMES:

Upon successful completion of this course a student will have a working knowledge of the biological basis of the infectious diseases of the human body.

TRANSFERABILITY:

Transfer: UA, UL, AU, AF, CU, KUC

Please note that a grade less than C+ is not accepted for transfer to the U of A for MMI 133. A minimum grade of C+ is required to receive credit in MI1330.

***Warning:** Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.** Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page <http://www.transferalberta.ca> or, if you do not want to navigate through few links, at <http://alis.alberta.ca/ps/tsp/ta/tbi/onlineSearch.html?SearchMode=S&step=2>

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

Midterm I -	25%	- In order to defer an exam due to
Midterm II -	30%	illness you will require a medical note.
Online Activities –	5%	
Study Aid -	5%	
Winter Final Exam -	35%	

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

MI 1330 A3/B3 Winter 2020

Week 1	Course introduction	
	Introduction to Microbiology	Ch. 1: 2 - 15.
Week 2	Prokaryotes	Ch. 4: pgs. 73 –93; 94 –102 (Review).
	Microbial Metabolism	Ch. 5: pgs. 110-115 and 120-131.
Week 3	Growth/Control of Growth	Ch. 6: pgs. 152-158; 165-168 and Ch. 7.
	Microbial Genetics	Ch. 8: pgs. 208 - 217; 221-223; 229 - 236.
Week 4	Lab	
	Viruses	Ch. 13
Week 5	Principles of Disease	Ch. 14
	Catch up/Review	
Week 6	Midterm I (Mon. Feb. 10th and Tues. Feb. 11th)	
	Pathogenesis	Ch. 15.
Week 7	Winter Break (Feb, 17 th - 21 nd)	
Week 8	Innate Immunity	Ch. 16.
	Adaptive Immunity	Ch. 17
Week 9	Vaccines	Ch. 18: pgs. 500 - 503.
	Antimicrobials I	Ch. 20: pg. 559 - 573.
Week 10	Lab	
	Antimicrobials II	Ch. 20: pg. 574 – 577; 579 – 582.
Week 11	Catch up/Review	
	Midterm II (Wed. Mar. 18th and Tues. Mar. 19th)	
Week 12	Diseases of the Skin and Eyes	Ch. 21
	Diseases of the CNS	Ch. 22
Week 13	Diseases of the Cardiovascular and Lymphatic System - Ch. 23	
	Diseases of the Respiratory System	Ch. 24
Week 14	Diseases of the Gastrointestinal System	Ch. 25
	Diseases of the Genitourinary System	Ch. 26
Week 15	Lab	
	Catch up/Review	

Final Exam scheduled by the Registrar's office

STUDENT RESPONSIBILITIES:

Students are responsible for the course material presented in lectures and assigned readings.

The College Policy on Students Rights and Responsibilities can be found at <https://www.gprc.ab.ca/about/administration/policies/>

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <https://www.gprc.ab.ca/about/administration/policies>

**Note: all Academic and Administrative policies are available on the same page.