



**Course Outline**

**UNIVERSITY STUDIES**

**MMI 133  
MEDICAL MICROBIOLOGY FOR NURSES  
FALL 2012**

**3 CREDITS  
3 HOURS LECTURE PER WEEK**

**INSTRUCTOR: DR. BLAINE LEGAREE**

<b>INSTRUCTOR:</b>	Dr. Blaine Legaree		
<b>PHONE NUMBER:</b>	(780) 792-5616		
<b>E-MAIL:</b>	blaine.legaree@keyano.ca		
<b>OFFICE NUMBER:</b>	S209D		
<b>OFFICE HOURS:</b>	Tuesdays	10:00 – 11:00 AM	
	Wednesdays	9:00 – 10:00 AM; 12:00 – 1:00 PM	
	Fridays	9:00 – 11:00 AM	
<b>HOURS OF INSTRUCTION:</b>	Mondays	1:00 – 3:50 PM	Room 273

### COURSE DESCRIPTION:

An introductory course in microbiology designed specifically for students in the BScN Program. The course begins with basic information on microorganisms, the immune system, hospital hygiene, transmission of infection, infections, antimicrobials, disinfection and sterilization. The later part of the course concentrates on pathogenic organisms related to organ systems and how they cause disease.

**PRE-REQUISITES:** Admission to the BScN program

### COURSE OUTCOMES:

Upon successful completion of this course, the student will be able to:

- Describe different types of infectious agents including bacteria, viruses, protists, fungi and multicellular parasites.
- Understand how we can grow, study, control and kill microbes in clinical and laboratory settings.
- Explain how microbes cause disease in individuals & populations.
- Recognize mechanisms of the immune system.
- Discuss the biological mechanisms of a number of clinically relevant infections of the human body.

### REQUIRED RESOURCES:

1. ***Microbiology: A Clinical Approach*** (2010), by A. Strelkauskas, J. Strelkauskas, & D. Moszyk-Strelkauskas. Published by Garland Science.

Available as an eTextbook download at <http://store.vitalsource.com/>

The text is meant as a reference to supplement what will be covered in lecture. It is highly recommended you read the textbook prior to coming to class. A complete list of the terms and concepts you are required to know can be found at the end of each set of lecture notes.

2. Other microbiology texts may also be used, but please consult with your instructor.

(E.g. *Microbiology with Diseases by Body Systems* by R.W. Bauman has been used in the past for this course. A complete reading list is available for this text.)

**TOPICS TO BE COVERED:**

**Please Note:** This course outline may be modified to facilitate unforeseen time constraints. Date and time allotted to each topic is subject to change.

<u>Lecture Topics</u>	<u>Text Chapters**</u>
1. Review of Chemistry, Biology and Genetics	2, 11
2. Introduction to Microbiology	1
3. Classifying Infectious Organisms	4
4. The Prokaryotes (Bacteria)	9
5. Single-Celled Eukaryotes (Protists and Fungi)	14
6. Viruses, Prions, and Cancer	12, 13
7. Multicellular Eukaryotic Parasites	14
8. How Do We Study Microbes?	4
9. Microbial Growth	10
10. Microbial Metabolism	3
11. Controlling Microbial Growth in the Environment	18
12. Pharmacology (Controlling Microbial Growth Inside the Body)	19
13. Human Health and Disease	4, 5, 7
14. Epidemiology	6, 8
15. The Body's Defenses	
i. Innate Immunity	15
ii. Adaptive Immunity	16
iii. Immune Disorders and AIDS	17
16. Infections of the Human Body	
i. Infections of the Body's Surface	26
ii. Infections of the Urogenital System	23
iii. Infections of the Respiratory System	21
iv. Infections of the Digestive System	22
v. Infections of the Nervous System	24
vi. Systemic Infections	25

\*\* Detailed readings for each topic are provided with the lecture notes.

**ADDITIONAL RESOURCES:**

**MOODLE:** Go to <http://ilearn.keyano.ca>

This course is supported through **Moodle**. The course syllabus, lecture notes, study questions, weblinks, PowerPoints and other electronic resources will be made available to you on **Moodle**.

*\* It is recommended that you download or print the lecture notes **before** coming to class.*

**TEXTBOOK WEBSITE:** <http://www.garlandscience.com/micro>

**FACEBOOK GROUP:** Join the Facebook Group for this class (“[MMI 133 Keyano](#)”) to discuss course topics, post comments, watch videos, and share links of interest.

**EVALUATION:**

<b>Quiz</b>	<b>5%</b>	September 17, 2012
<b>Midterm Exam I</b>	<b>20%</b>	October 15, 2012
<b>Midterm Exam II</b>	<b>20%</b>	November 5, 2012
<b>Assignment</b>	<b>15%</b>	Due November 19, 2012
<b>Final Exam</b>	<b>40%</b>	<i>Date to be set by the Registrar</i>

**Examinations:**

- Midterms and the Final Exam are based on material covered in the lectures. Exams are broken down into portions of multiple choice questions, short answer questions and long answer questions. The final exam is cumulative, but will focus on material covered following the second midterm.
- The final lecture examination **must** be written in order to complete this course.
- **Please note that travel plans will not be accepted as a valid excuse for missing a final exam.**
- *Students should consult: <http://keyano.ca/current-students/students/exams>*

**Assignment:**

- Assignments are to be the product of **each student's own work**. Although you may discuss the assignment with others, you are expected to do the actual work by yourself, **independently**. Disciplinary action will be taken if strong similarities are found between examples of a student's work and someone else's. Do not share assignments, nor loan them to anyone.
- Assignments must be typed.
- **Late assignments will be penalized 10% per day late and will not be accepted more than 5 days late.**

**GRADING SYSTEM:**

Letter Grade	Description	Grade Points
A+		4
A	Excellent	4
A-		3.7
B+		3.3
B	Good	3
B-		2.7
C+		2.3
C	Satisfactory	2
C-		1.7
D+		1.3
D	Minimal Pass	1
F	Failure	0

Students intending to transfer to other institutions should strive for a ‘C-’ as a minimum. Transfer information on each course is available at the [Alberta Council on Admission and Transfers](#).

**CLASSROOM POLICIES:**

- **Regular attendance is expected at lectures and attendance will be taken.** The lectures will often include material which is not in your textbook or the emphasis in class may differ from that in the text; you will be responsible for the material taught. Notes and PowerPoints should be thought of as **study guides**: you must take additional notes in class to do well!
- **University Studies Department Policy on Cell Phones and Other Electronic Devices:**
  - Except by express permission of the instructor, cell phones and other electronic devices:
    - must be turned off and unavailable for use during class;
    - must be turned off and stored in a designated area during all exams;

**Note:** Lectures, study questions, assignments, and textbook readings are all designed to help you succeed in this course. **Completing assignments and attending lectures are essential to your success. Students who do not complete all the required work should not expect to pass the course.** Good study habits, such as reviewing material in advance of the midterms and participating in class, will also aid your efforts.

**IMPORTANT DATES:**

Sept 3	Labour Day (no classes)
Sept 18	Courses dropped after this date will be designated “W”. (A withdrawal (W) is not reflected in your GPA)
Oct 8	Thanksgiving (no classes)
Oct 26	Courses dropped after this date will be designated “WF”. (A withdrawal failure (WF) counts as a 0 in your GPA)
Nov 12	Holiday in place of Remembrance Day (no classes)
Dec 7	Last day of classes
Dec10-19	Final Exams

## COLLEGE POLICIES

### Equality, Equity and Respect

The Keyano College is committed to providing an environment of equality, equity and respect for all people within the College community. All members of this community are considered partners in developing teaching and learning contexts that are welcoming to all. Faculty, staff, and students are encouraged to use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and valued in relation to their gender, ethnic and cultural background, and sexual orientation.

*Students should consult:* <http://keyano.ca/current-students/individual-rights>

### Plagiarism and Cheating

Every student expects to be treated and evaluated fairly in a course. Plagiarism and cheating robs everyone of this right.

No student may submit words, ideas or data of another student or person as his or her own in any writing, project, assignment, quiz, electronic presentation, exam etc. Any work used that is not the student's own must be clearly cited as belonging to someone else. There are penalties for using other's work and not citing it. The Student's Rights & Responsibilities document clearly outlines these penalties and the appeal process.

- No learner can obtain information from another student during an exam.
- No learner can bring unauthorized information (paper or electronic) into an exam or quiz.
- No student can submit work done in another course for grading in this course without the written prior approval of the course instructor.
- No student can submit copyright protected or commercially produced materials as part or all of an assignment without proper citation & permission.

### Student Rights & Responsibilities

Students should consult the Keyano College Credit Calendar or online at:

[http://keyano.ca/sites/default/files/a\\_files/calendars/keyano.calendar.credit\(2012-2013\).pdf](http://keyano.ca/sites/default/files/a_files/calendars/keyano.calendar.credit(2012-2013).pdf)

### Specialized Supports and Duty to Accommodate

*Disability Support Services: Learner Assistance Program*

If you have a documented disability or you think that you would benefit from some assistance from a Disabilities Counsellor, please call or visit the Disability Supports Office 780-792-5608 to book an appointment (across from the library). Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at Keyano College.

*Specialized Supports and Duty to Accommodate*

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation, and defined by a number of Keyano College policies. Keyano College is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.