Course Outline

UNIVERSITY STUDIES

MMI 133
MEDICAL MICROBIOLOGY FOR NURSES
Fall 2014

3 CREDITS
3 hours lecture per week

INSTRUCTOR: Dr. Blaine Legaree
INSTRUCTOR: Dr. Blaine Legaree

PHONE NUMBER: (780) 792-5616

E-MAIL: blaine.legaree@keyano.ca

OFFICE NUMBER: S209D

OFFICE HOURS:
- Tuesdays 12:00 – 12:50 PM
- Wednesdays 12:00 – 12:50 PM
- Thursdays 12:00 – 1:50 PM
- Fridays 12:00 – 12:50 PM

HOURS OF INSTRUCTION:
- 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:
   
   *Available as an eTextbook download at [http://store.vitalsource.com/](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.)
ADDITIONAL RESOURCES:

MOODLE: Go to http://ilearn.keyano.ca
This course is supported through Moodle. The course syllabus, lecture notes, study questions, 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.

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.

<table>
<thead>
<tr>
<th>Lecture Topics</th>
<th>Text Chapters**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction to Microbiology</td>
<td>1</td>
</tr>
<tr>
<td>2. Classification of Infectious Organisms</td>
<td>2, 4, 11</td>
</tr>
<tr>
<td>3. Bacteria</td>
<td>9</td>
</tr>
<tr>
<td>4. Simple Eukaryotes (Protists and Fungi)</td>
<td>14</td>
</tr>
<tr>
<td>5. Multicellular Eukaryotic Parasites</td>
<td>14</td>
</tr>
<tr>
<td>6. Viruses, Prions, and Cancer</td>
<td>12, 13</td>
</tr>
<tr>
<td>7. Microbial Culturing</td>
<td>10</td>
</tr>
<tr>
<td>8. Microbial Identification</td>
<td>4</td>
</tr>
<tr>
<td>10. Antimicrobials (Controlling Microbial Growth Inside the Body)</td>
<td>19</td>
</tr>
<tr>
<td>11. Epidemiology</td>
<td>6, 8</td>
</tr>
<tr>
<td>12. Human Health and Disease</td>
<td>4, 5, 7</td>
</tr>
<tr>
<td>13. The Body’s Defenses</td>
<td></td>
</tr>
<tr>
<td>i. Innate Immunity</td>
<td>15</td>
</tr>
<tr>
<td>ii. Adaptive Immunity</td>
<td>16</td>
</tr>
</tbody>
</table>
iii. Immune Disorders and AIDS

   i. Infections of the Body’s Surface
   ii. Infections of the Urogenital System
   iii. Infections of the Respiratory System
   iv. Infections of the Digestive System
   v. Infections of the Nervous System
   vi. Systemic Infections

** Detailed readings and topic outlines for each unit are provided with the lecture notes.**

---

**EVALUATION:**

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>5%</td>
<td>September 15, 2014</td>
</tr>
<tr>
<td>Midterm Exam I</td>
<td>20%</td>
<td>October 6, 2014</td>
</tr>
<tr>
<td>Midterm Exam II</td>
<td>20%</td>
<td>November 3, 2014</td>
</tr>
<tr>
<td>Assignment</td>
<td>15%</td>
<td>Due November 10, 2014</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
<td>Date to be set by the Registrar</td>
</tr>
</tbody>
</table>

**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.
- Note: travel plans will not be accepted as a valid excuse for missing a final exam.
- Students should consult: [http://www.keyano.ca/Academics/Examinations](http://www.keyano.ca/Academics/Examinations)

**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:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Description</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>B-</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>C-</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>Minimal Pass</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
</tbody>
</table>

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!

- **Cell Phones and Electronic Devices:**
  - Except by express permission of the instructor, cell phones and other electronic devices:
    - Can be used in class only for course relevant work;
    - Should not be a disruption to other students;
    - 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:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 16</td>
<td>Last day to DROP courses with full refund ($100 deposit is non-refundable)</td>
</tr>
<tr>
<td>Oct 10</td>
<td>Last day to WITHDRAW with a refund (50%)</td>
</tr>
<tr>
<td>Nov 26</td>
<td>Last day to WITHDRAW (Grade of W)</td>
</tr>
<tr>
<td>Dec 5</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Dec 8-12</td>
<td>Final Exams</td>
</tr>
</tbody>
</table>
COLLEGE POLICIES

Students should consult the Keyano College Credit Calendar
(online at: http://www.keyano.ca/Academics/CreditCalendar)

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://www.keyano.ca/StudentLife/StudentConduct/IndividualRightsPolicy

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://www.keyano.ca/CurrentStudents/StudentConduct/StudentRightsResponsibilities

Counselling and Disability Services
Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career, and academic counselling.
Disability Services provides educational services to students with disabilities.

Both Counselling and Disability Services are located in CC167.
Course Outline

UNIVERSITY STUDIES

MMI 133
MEDICAL MICROBIOLOGY FOR NURSES
Fall 2014

3 CREDITS
3 hours lecture per week

Blaine Legaree, Instructor

Date

Reviewed and approved by:

Louis Dingley, Chair

Date

Guy Harmer, Dean

Date