Overview / General Information

Students will learn how the immune system works and especially how it interacts to prevent microbial infection. In addition, students will learn about the most common and notorious pathogenic bacteria that cause human disease. The laboratory component of the course will focus on isolation and characterization of these organisms. The lecture portion of the course will focus on pathogenic mechanisms and ways these organisms get established and avoid destruction by the immune response. You will also learn the fundamentals of the human immune response that are critical to our health but can also contribute to disease. You will also learn about how these diseases are treated and the mechanisms of antimicrobial action.

The laboratory component of MLSCI 242 will focus on isolation and characterization of pathogenic microorganisms, and emphasizes diagnostic procedures. Clinical aspects of microbiology and the role of the medical microbiology laboratory in the diagnosis and treatment of infectious diseases will be explored throughout the course. Biosafety procedures, problem solving and investigative skills will be emphasized in order to prepare students for work in a medical microbiology laboratory. Please note that Personal Electronic Devices are NOT allowed in the laboratory environment.

Policy about course outlines can be found in Course Requirements, Evaluation Procedures and Grading of the University Calendar. http://calendar.ualberta.ca/content.php?catoid=6&navoid=806#course-requirements,-evaluation-procedures-and-grading-a

Course Instructors

Lecture: Dr Mark Peppler, PhD  
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Lab:  Dr Jelena Holovati, PhD  
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A course schedule and pdf files of key material presented in class can be found on Moodle (eClass). Pdfs of class notes will be posted on Moodle at least 24h prior to class barring unforeseen problems. It is expected that students will have read the assigned notes prior to class and have them in hand to allow for in-class discussion and active learning exercises.

Course Communication:

Course communication will occur face to face or through email. Students are responsible for all course information received via email.

Distribution of Marks

The information you are expected to know from the course is cumulative. Basic principles of immunology learned early in the course will be referred to later in the sessions on specific pathogens. The learning goal is that the material given later will reinforce earlier concepts, and comparisons among pathogens will be emphasized to draw attention to similar mechanisms of pathogenicity. Typical Grading Scheme for MLSCI 242/4 based on past class distributions. Late assignments will receive a mark of 0%.

Laboratory work is an integral part of the coursework and accounts for 40% of the final grade. Students must obtain a mark of 60% in the laboratory component to pass MLSCI 242.
MLSCI 242:
Lecture  60%
- Midterm Exam 1  15%
- Midterm Exam 2  15%
- Final Lecture Exam 30%

Laboratory  40%
- Quizzes  10%
- Patient Cultures  10%
- Final Lab Exam  20%

MLSCI 244:
- Midterm Exam 1  25%
- Midterm Exam 2  25%
- Final Exam  50%

Attendance:

Attendance in laboratory sessions is compulsory. Unexcused absences may result in a student being refused permission to write the final examinations (see University of Alberta Calendar, University Regulations and Information for Students, 23.5.6 – Absence from Exams). Should illness or significant personal difficulties prevent lab attendance, notifying the MLS office and lab instructor is MANDATORY. Arrangements for covering the missed labs will be made, as appropriate. Failure to notify the instructor may result in the denial for any requests for makeup assignments, quizzes, or examinations.

Academic Integrity and Professionalism:

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

The knowledge, skills and attitudes developed in the MLS program are transferable between each MLSCI course; as such there is the expectation that professional habits developed in the program are practiced in every course. During phase 1 you learn many aspects of professionalism and the expectations of MLS faculty. Your final professionalism grade in MLSCI 200 is a reflection of your professional behavior in every MLSCI course. This means that a professionalism violation in any MLSCI course will result in a decrease of your MLSCI 200 grade. Examples of violations that would result in a professionalism grade reduction include but are not limited to: punctuality (this includes routinely being only a few minutes late for lecture or lab), inappropriate cell phone/electronic device usage in the classroom, any cell phone usage in the phase 1 lab and inappropriate lab attire.

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).