Microbiology 353 –Term 1 [1 credit]

Instructor:
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Required Text:
1. Microbiology 353 Custom Laboratory Manual
2. Custom Package sold by UBC bookstore
   “Techniques in Microbiology-A student handbook” J. Lambert and
   “Microbiology: A Photographic Atlas for the Laboratory” S. Alexander.

A. Course Goals
The course is designed to:
• Familiarize students with microbiology lab techniques, procedures and equipment that are commonly employed in food microbiology.
• Expose students to a variety of resources for planning and executing microbial analysis of food samples.
• Apply selected methods of writing and evaluating scientific data in the field of microbiology.
• Investigate foodborne pathogens and their role in the diseases.
• Analyze issues associated with the global food chain.

B. Course Requirements
• 1 hour tutorial each Monday.
  This is a lecture style format which will emphasis theory and practices of examining foodborne pathogens. There will be in-class problem solving activities and all tutorials are mandatory.
• 2 hour lab each Monday. See schedule in Laboratory Manual.
  There are 11 scheduled laboratories and all laboratories are mandatory. Failure to attend laboratories without a valid reason may result in a deduction of 1% of students grade. Students who fail to complete 80% of the laboratories may not be given a passing grade. Laboratories cannot be made up.

C. Student Evaluation
1. Exams:
   Midterm Exam 15%
   Final exam 35%
2. Lab Reports 20%
3. Group Project 15%
4. Lab Notebook Reports 10%
5. Lab Notebooks – Data Records 5%
Student Evaluation Details

1. Exams

Midterm exam 15%
The midterm exam will be held in the tutorial class (12 pm – 1:50 pm) close the end of October. This exam will test students on material covered on laboratories and relevant theory on laboratories 1 - 4. Details will be provided closer to that time.

Final Examination 35%
A written examination will be scheduled by the University in the scheduled examination period of December. Students are expected to be available throughout the entire exam period and cannot be accommodated for an earlier leave. The final exam will focus on laboratory exercises after the midterm exam. The exam may cover general concepts from pre-midterm labs but will not test directly on lab protocols and media from these early labs.

Students who do not attend 80% of the laboratories will not be permitted to write the final examination.

2. Lab Reports 20%
These assignments will be based on laboratory data, results and interpretations. There will be a minimum of 3 submissions for the term. Most assignments will consist of data presentation, processing and analysis. One of the reports will be a formal report based on the Journal of Bacteriology. The format of each report will be provided prior to the laboratory exercise.

3. Group Project 15%
Students will be assigned an emerging pathogen to study. The group project will consist of two reports and a short oral presentation on their pathogen of interest.

4. Lab Notebook Reports 10%
These are short reports that include data and summaries and are usually presented in the lab notebook.

5. Lab Notebooks 5%
Lab notebooks will be checked at the end of the term for completeness of data recorded from the lab exercises.