BIOL2303A/ENVE2002A – Introduction to Microbiology

Course Outline – Winter 2015

Monday, Wednesday 8:35 – 9:55
RB2200

Instructor: Alex Wong
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Course Description

Microbes are an incredibly diverse and abundant group of organisms. While we are most familiar with microbes as disease-causing pathogens, they also carry out critical roles in the ecosystem, allow our digestive tracts to absorb nutrients, and produce awe-inspiring natural wonders. Our goal this term will be to develop an appreciation for, and an understanding of, this diversity. In order to do so, we will discuss microbes from evolutionary, ecological, cellular, and molecular perspectives. Our primary focus will be on bacteria, but from time to time we will discuss other microbes, including viruses, archaea, and microbial eukaryotes.

Learning Outcomes

By the end of this class, successful students will demonstrate the ability to:

- define and explain key concepts in microbiology;
- interpret evolutionary relationships amongst microorganisms;
- describe core cellular functions in microbes;
- summarize ecological processes carried out by microbes;
- relate cellular functions to ecological and evolutionary processes, and vice versa.

Assessment

Online quizzes and classroom discussions will be used as an aid to achieving the learning outcomes. Although these activities contribute only 5% to your final grade, it is very much in your interest to complete them, as they will help you to identify areas for you to focus on.

Your success in meeting the learning outcomes will be assessed by two midterms, a final exam, and one assignment. The final exam is cumulative, although it will focus on material from the last third of the course.

You are required to complete one assignment over the course of the semester. This assignment may be a short written assignment, an artistic work, a video or other piece of media, or a class presentation. We will discuss possible topics and assignment details in the second class of the
semester. You must pick a due date and a topic for your assignment by Monday, January 19th during class time.

Your grade will be determined as follows:

- Online quizzes: 5%
- Midterm 1 (February 9): 25%
- Midterm 2 (March 9): 25%
- Assignment (Throughout term): 10%
- Final exam (Date TBA): 35%

Textbook

The textbook for this course is Brock's Biology of Microorganisms. Hard copies are available at Haven Books and at the Carleton University Bookstore. You can also purchase an online-only etext using the course code MMBWONG81251 at:

http://www.pearsonmylabandmastering.com/northamerica/masteringmicrobiology/

Plagiarism

The University Senate defines plagiarism as “presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.” This can include:

- reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings;
- failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence that cannot be resolved directly by the course’s instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.
Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the Student Guide

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the Student Guide

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable).