

MICR200A LEARNING OBJECTIVES

Students will gain insight into historical events that initially identified microbes. Processes used to establish the role of microbes in important processes such as disease will also be examined and students will be able to compare these methods to modern techniques utilized in the field of microbiology.

The major structural components of bacteria, archae and eukaryotes will be described. Utilizing this information, students will be able to compare the structures between these organisms, and rationalize why they have evolved specific adaptations.

Conditions for growth of microbes, both in natural and laboratory settings will be examined. Students will demonstrate the ability to apply this knowledge to both identify and classify microbes. Additionally, students will learn to categorize microbes based on a variety of phenotypic and genotypic traits.

Metabolic pathways will be described in the context of microbes, and compared to more complex systems, particularly humans. The suitability of using bacteria as a model organism for higher order eukaryotic organisms will be appraised.

Students should be able to describe the basics of virion structure, virus replication, viral gene regulation and the difficulties of making anti-viral drugs and vaccines for example viruses such as polio, flu, HIV and phage.

The laboratory component of the course will introduce basic microbiology techniques. By completion of the course, students will be capable of performing aseptic technique, as well as isolating, visualizing and identifying microbes.

Tentative Class Schedule :

topic	dates	textbook chapters
1) Introduction -history -visualization -structure		1 ±2
MIDTERM 1 (19% final grade)	Thursday., Sept. 26	
2) Nutrition and Growth -general intro to growth -culture media -morphology and replication -controlling microbial growth		3, 5, 21, 28
3) Metabolism		3, 14
MIDTERM 2 (19% final grade)	Thursday, Oct. 24	
4) Diversity of Microbes -phylogeny -microbe classification		13 ±18
5) Viruses		8, 10, 11, 30

Important dates and evaluation:

EVALUATION	Date
19% midterm exam 1	in class Thursday, September 26
19% midterm exam 2	in class Thursday, October 24
19% final exam	2 hours,

DEPARTM

Centre for Accessible Learning

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, approach the Centre for Accessible Learning (CAL) as soon as possible in order to assess your specific needs.

<https://www.uvic.ca/services/cal/index.php>

Course Experience Survey (CES)

I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) regarding your learning experience. The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to your [CES dashboard](#). You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device. I will remind you nearer the time but please be thinking about this important activity.