Biology of Microorganisms Biology 2711 (2024W)

Lecture:	**Tue & Thu 1:00 – 2:300 pm (Room RB1022)**
Course instructor:	**Kam Tin Leung, CB4024**
	Phone: 343-8010 (Ext. 8265)
	E-mail: ktleung@lakeheadu.ca
Office hours:	**Monday, 3:00 – 4:00 pm (OR appointment)**
TA:	**Dhanushya Jeyakumar (djeyakum@lakeheadu.ca)**
Lab:	**Room CB 3012 (Starts in the 2nd week of the semester)**
Lab instructor:	**Michael Moore, CB3011**
	Phone: 343-8010 (Ext. 8909)
	E-mail: mnmoore@lakeheadu.ca

This course is an introduction to the subject of microbiology. Two major areas will be covered in this course. Theme 1 includes some history and general aspects of microbiology, bacterial cell structure, metabolism, and taxonomy. Theme 2 includes general bacterial and viral genetics. Specific disciplines of microbiology will be offered in the 3rd and the 4th years (e.g. Pathogenic Bacteriology, Applied and Environmental Microbiology, Food Microbiology, Biology of Food Safety, Molecular Genetics, Biology of Fungi, Parasitology, Research Internship and Honours Thesis).

Michael Moore is the lab instructor of the Biology of Microorganisms course. The lab is a mandatory part of this course. Students will learn the basic skills in handling bacteria, proper use of microscope, staining and aseptic techniques, characterize and identify microorganisms.

Textbooks (Reference)	1. Microbiology: The Human Experience (Preliminary, or more recent edition). By J.W. Foster, Z. Aliabadi & J.L. Slonczewski. W.W. Norton & Co. 2. Microbiology: A Human Perspective (4th or more recent edition). By E.W. Nester et al. McGraw Hill.
Class notes	D2L
Lab book	D2L
Lecture	Tue & Thu 1:00 – 2:30 pm (Room RB1022)
Lab	CB 3012
1st day of class	Jan. 9 (Tuesday)
Final date to register	Jan. 19 (Friday)
Final date to withdraw	March 8 (Friday)
Last class	April 4 (Thursday)
1st midterm exam (20%)	Jan. 30 (Tuesday)
- Closed book exam 1h20min (Rm RB1022)	
2nd midterm exam (20%)	Feb. 29 (Thursday)
- Closed book exam 1h20min (Rm RB1022)	
Final exam (30%)	Date - To be arranged
- Closed book exam 3h (Room – To be arranged)	
Laboratory (30%)	
Total = 100%	

Lecture schedule for Biology of Microorganisms (Biol. 2711)

- The schedule may be subject to change depending on the progress of the course.

Date	**Topic**
Jan. 9 (Tue) Jan. 11 (Thu)	Introduction and general microbiology Introduction and general microbiology
Jan. 16 (Tue) Jan. 18 (Thu)	Introduction and general microbiology Cell structure and functions
Jan. 23 (Tue) Jan. 25 (Thu)	Cell structure and functions Microbial metabolism
Jan. 30 (Tue) Feb. 1 (Thu)	**1st Mid-term exam** Microbial metabolism
Feb. 6 (Tue) Feb. 8 (Thu)	Microbial growth Microbial growth
Feb. 13 (Tue) Feb. 15 (Thu)	Sterilization, disinfection and antimicrobial agents Antibiotic resistance
Feb. 19-23	**Reading Week**
Feb. 27 (Tue) Feb. 29 (Thu)	Molecular genetics: DNA replication **2nd Mid-term exam**
March 5 (Tue) March 7 (Thu)	Molecular genetics: DNA replication Gene expression
March 12 (Tue) March 14 (Thu)	Genetic regulations Genetic regulations
March 19 (Tue) March 21 (Thu)	Bacterial genetics Bacterial genetics
March 26 (Tue) March 28 (Thu)	Bacterial taxonomy and diversity Viruses
April 2 (Tue) April 4 (Thu)	Viruses Viruses