

CELL BIOLOGY

Biology 2230 WA

COURSE OUTLINE WINTER 2026

Instructor

Mr. Michael Moore

Biology, CB3011A

Phone: 807-343-8010, x8909

Email: mnmoore@lakeheadu.ca or through the email link in the D2L course page.

Office hours

By appointment:

Email for appointment

My office is in the Centennial Building, room CB 3011A (look for my name on the CB3011 door)

Teaching Assistants (bio will be provided next week)

Amawish Chaudhry

Ammar Elnaggar

Lectures and Tutorial

Lectures:

Mon and Wed 5:30 pm – 7:00 pm, RC 1002 plus synchronous ZOOM.

Tutorial:

Fri 2:30 pm – 3:30 pm, BB 2006 Not Every Week - a schedule will be developed.

Textbook

There is currently no required textbook for this course. Links to resources will be provided and suggested reading will be included in lecture material or assignment descriptions.

Two open-source resources that I anticipate using are:

Biology 2e <https://openstax.org/details/books/biology-2e>

Fundamentals of Cell Biology <https://open.oregonstate.education/cellbiology/>

Both can be accessed through a browser to read online, or downloaded as pdf or other formats.

Learning Objectives

- Recognize, name, draw, and describe important structures of animal and plant cells.
- Describe, explain, discuss, and compare important functions and processes of animal and plant cells.
- Describe and explain experimental approaches used to discover and explore the structures and functions of cells.
- Demonstrate an understanding of the principles of scientific inquiry.
- Demonstrate the ability to think critically and employ critical thinking skills.
- Read and interpret graphs and data.
- Demonstrate the quantitative skills needed to succeed in Biology.
- Demonstrate the ability to make connections between concepts across Biology.
- Demonstrate the ability to find peer-reviewed publications, understand their structure and extract the information needed to expand knowledge on a specific topic in cell biology.
- Communicate effectively in writing

DESIRE2LEARN – D2L

You will have access to a course page through Desire2Learn (D2L) where you'll find course updates, recorded video lectures, the links to the live Zoom meetings, lecture slides, assignments, links to selected web-sites, etc.

The web address for the 2026W offering of BIOL 2230 on D2L is::

<https://mycourselink.lakeheadu.ca/d2l/home/173280>

There will not be a separate site for the lab/tutorial.

Evaluation Breakdown

Activity (Dates subject to change with notice)	Weight (percent final mark)
Weekly Quiz* Due Sunday nights before midnight	8%
Class Participation/D2L Assignments	7%
Literature Assignment Completed in groups of two* Due Sunday March 22, 2026	15%
Mid-term tests Test #1: Feb. 9, 2026 Test #2: March 16, 2026	40% (2 x 20%)
Final exam During exam period	30%
Total	100%

Please note that all tests and the final exam will be in person.

Proposed Lecture Topic Schedule

Week	Date	Lecture Topic
1	Jan. 12 - 16	Intro to the course Overview of Cell Biology, Chemistry of the Cell
2	Jan. 19 - 23	Chemical Reactions and Biochemical Energetics
3	Jan 26 - 30	Proteins and Enzymes
4	Feb 1 - Feb. 5	Methods in Cell Biology
5	Feb. 8 - 12	Biomembranes
6	Feb. 16 - 20	Study Week
	Feb. 23 - 27	Transport across Membranes
7	Mar 2. – Mar. 5	Cellular Energetics
8	Mar. 9 - 13	Cellular Energetics
9	Mar. 16 - 20	Moving Proteins
10	Mar. 23 - 27	Vesicular Traffic, Secretion, and Endocytosis Microfilaments, Microtubules, and Intermediate Filaments
11	Mar. 2 – Apr. 3	Integrating Cells into Tissues

