

Cell Biology Biol360 Summer 2026 – ONE PAGE Summary

- **Everyone is welcome!**
- **Instructor:** Barbara Ehlting, behlting@uvic.ca
- **Evaluation:**
 - Weekly invigilated *quizzes* every Tuesday in class (count best 5 out of 6): 40%
 - *Final exam* invigilated on June 26 2026 in class: 40%
 - → one page letter-sized hand-written study sheet is allowed for quizzes and final exam
 - *Peer teaching*: sign up for a topic and teach your peers for 10 min, 8% (schedule may vary over time)
 - *Group Paper assignment* on June 10 or 12 in class, read paper before: 10%
 - *Artistic assignment* 2% participation due June 25, 2026
 - *Optional EDI assignment* 3% due June 25, 2026
- **To pass the course and avoid an N grade, students**
 - *write minimum of three quizzes,*
 - *write final exam,*
 - *peer-teach.*
- **Material:**
 - *Lecture slides* posted on course webpage
 - *Lecture recordings* may be available on course webpage
 - “The molecular biology of the Cell” by Alberts, 7th ed *textbook*, optional
 - Selected *textbook figures* for peer teaching posted on course webpage
- **Need help?**

If you have any questions, here are places to find answers (in that order):

 - Most questions can be answered by reading the *course outline*
 - Important information will be conveyed during *class time* and /or via course webpage *announcements*. Students are expected to read their emails.
 - Ask your *peers*
 - Contact *me*

Cell Biology, Biol 360, University of Victoria Summer 2026

Welcome!

We acknowledge and respect the Lək̓ʷəŋən (Songhees and X̱wsep̓səm/Esquimalt) Peoples on whose territory the university stands, and the Lək̓ʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

I am very happy to live on this beautiful land, home to humans for thousands of years. Let's be thankful to learn together on this land.

I welcome everyone to learn in this course, and I respect every human being from all ethnic backgrounds, religious beliefs, sexual orientations, genders, socioeconomic backgrounds and abilities.

Your instructor

*Instructor: Dr. Barbara Ehlt*ing (Course coordinator, lecturer)

email: behlting@uvic.ca

How to connect with me?

- You can always connect with me via email (responses within one business day during reasonable working hours).
- Want to meet in person? Just send me an email and we arrange a meeting time (preferred times: right after class). Office hours are for you to connect with me, discuss lecture material, and to get to know each other.
- Want to know about my background? You can find out more on the Brightspace 'Meet your instructor' site!

Intended Learning Outcomes for BIOL360 Cell Biology:

At the end of this course, you will ...

- be familiar with and understand the theory of **major isolation and visualization techniques**, such as isolation of cells and organelles, cultivation of cells, and microscopy of cells.

→ Your knowledge about techniques will enable you to know when to apply which technique for specialized research questions.

- be familiar with **cellular processes that are most studied and best understood** including membrane composition and transport across membranes, intracellular protein localization, cell signaling, cytoskeleton assembly and disassembly, cell cycle regulation, apoptosis and cancer.

→ Your knowledge about pathways will enable you to find out how potential mutations might affect pathways and how pathways interact, for example the impact of

mutated cell cycle genes in cancer and the impact of the cytoskeleton on cell division.

- **read and interpret figures** from recently published peer reviewed scientific papers

- **collaborate with your peers** in pair discussions, and a group paper project

- You will learn to draw conclusions from graphs by using your knowledge and discuss with your peers.

- actively engage with class material by **teaching your peers** key concepts in short presentations.

- Your overall knowledge about most common molecular techniques and cellular pathways will enhance your scientific thinking.

- The active learning components in this class hopefully increase your joy for science and overall understanding of scientific concepts.

- perform to perfection **major life skills** such as meeting deadlines, punctuality, time management, collegiality, open discussion with peers and instructor, being proactive aiming for problem solving.

Designated Class time and location:

Tuesday, Wednesday and Friday at 8.30 am -10.20 am in Cun146. Classes start Tuesday May 12th and end Friday June 26th.

Class time is our time together and critical for your active learning journey. I designed this course as an active learning experience including active listening and asking questions in addition to student presentations, group work and active discussions.

Prerequisites:

Biol230 OR BME200 and BME201, AND one of Bioc 299, Bioc300A, Bioc300B (Bioc300A or 300B can be taken as corequisites). Please be aware that if you drop a co-req the system will automatically drop you from this course as well! Students who are missing one pre/co-requisite might be allowed to register with special permission, however it is the students' responsibility to catch up with any missing background knowledge.

Tentative Class Schedule

- Welcoming, rules and guidelines
- Introduction to Cell Biology (parts of chapters 1,3, 4, 12, 14)
- Working with cells: visualizing cells and manipulation of cells (chapters 8, 9)
- Membranes (chapter 10)
- Membrane transport of small molecules & the electrical properties of membranes (chapter 11)
- Intracellular Compartments and Protein sorting (chapter 12)
- Intracellular vesicular Traffic (chapter 13)
- Cell communication and signaling pathways in cells (chapter 15)
- Cytoskeleton (chapter 16)
- Cell cycle (chapter 17)
- Apoptosis (chapter 18)
- Cancer (chapter 20)
- Wrap up and catch up, Review, evaluation...

Class material

- **Textbook** (optional): Molecular Biology of the Cell, 7th edition, Alberts B, Johnson, A, Lewis J, Morgan, Raff M, Roberts K, Walter P, Garland Science, ISBN 978-0-393-88482-1

The book is available to you in various forms:

- the textbook can be purchased at the bookstore:
9780393884821 Hardcover \$238.95,
9780393427080 360 day licence \$133.95 E-TEXT
- Etext also available via VitalSource.com and at Norton
<https://digital.wwnorton.com/mboc7>
- The Uvic library has the book on reserve.
- Figures from selected chapters are posted on Brightspace

We are using the latest edition of the textbook. If you get your hands on a used textbook of the 6th edition, you may use it, but it is your responsibility to find the appropriate readings.

For the in-class presentation (see below) please ONLY use the latest 7th edition!

- **Lecture notes** will be posted on Brightspace (content-> weeks). Bring the lecture notes to classes and add comments on slides and answer questions. **Provided lecture slides are for personal use ONLY and are not allowed to be distributed without permission from the publisher.** The material is protected under copyright law, even if not marked with a ©. Any further use (e.g. **copy and pasting into AI**) or distribution of materials to others **requires the written permission** of the instructor.
- **Recordings:** Lectures (and students' peer-teaching) may be recorded with Echo360

(video files) and/or voice (audio files) and posted on Brightspace after each lecture.

Evaluation:

- **Weekly quizzes 40%** every **Tuesday** (May 19, 26, June 2, 9, 16, 23) at **8.30 am** invigilated **in class**. Students with accommodations should start earlier to be back in class for lectures at 8.45 am.

Each quiz is worth 8%. Only the **five best** quizzes (total of 40%) will be used for your final grade (ONE freebie). If students miss more than one quiz, the missed % will be added to the final exam. You must write at least **three** quizzes to successfully complete this class. If you miss more than three quizzes alternative forms of evaluation might be necessary. This must be arranged in writing via email within one week of missing the fourth quiz. There are no deferred options for weekly quizzes.

- **Final exam: 40%**, on last day of class, Friday **June 26th**, at 8.30 am – 10.20 am, cumulative, invigilated in class. You must write the final exam to complete this course. If you miss the final exam apply for RAC and contact BE via email immediately to arrange for deferred final exam date and location.

The weekly quizzes and the final exam are **invigilated in person in the classroom**.

Please note: for all six quizzes and the final exam you are allowed to bring a **ONE page hand-written letter-sized study-sheet** (only students according to documented accommodations are allowed to write on a tablet and print).

- **Peer teaching: 8%**, every student will sign up for one topic to teach your peers for 10 min in class. Up to three student per lecture will peer teach.

The peer teaching is a key element of your learning in Cell Biology putting you in the driver seat because:

1. **Students learn more by teaching others.** To teach each other and to talk about a topic, students need to understand the concept themselves first¹.

2. **Students learn more by listening to each other** because it supports diversity².

As students know what their peers know and what they don't know I expect that students will explain the material well!

Please note that the **dates for your peer teaching are preliminary** and the schedule might change as the term progresses. If you cannot teach in person on your day, contact BE via email immediately to discuss options.

Please see grading rubric for the peer teaching in the presentation document (posted on Brightspace -> content-> introduction).

- **Paper assignment: 10%** completed in groups **during class time** on Wed **June 10**. Students have to read the paper before the in class assignment. During the assignment students will answer questions about the paper in groups. There will be no deferred

group paper assignment. If you are sick on the day of the assignment, contact BE via email immediately to discuss options.

- **Artistic Assignment 2% participation grade:** Get creative: write a poem using scientific words used in the class, paint a picture related to our topics, dance your favorite scientific pathway or come up with your own creative idea and relate it to class content (video, podcast, meme...). Take multiple shots to show your progress! Indicate on your submission if you are ok with presenting your work to the class/in the biology hallway. Submission to the Brightspace submission box anytime during the term but no later than June 25th, 2026.

- **Optional EDI (Equity, Diversity, Inclusion) Assignment 3% participation grade:** Identify an injustice or EDI issue related to cell biology and present your review in your preferred mode (video, podcast, poster, ...). Your work must include substantial amount of information and at least **two citations** from peer reviewed sources. Submission to the Brightspace submission box anytime during the term but no later than June 25th, 2026. Once you submit the final exam will count 37% instead of 40%.

-Students with **accommodations** are encouraged to reach out to BE via email to discuss options specifically for this class ASAP.

The use of artificial intelligence (AI):

-Acceptable use of AI:

AI can be very useful when students use it as a study tool: it is ok to write your own summary and ask AI to provide you exam questions. It is not ok to copy and paste lecture slide content to AI because of copy right.

-Nonacceptable use of AI:

The **use of any form of AI during invigilated quizzes/exams and other assessments** is unethical and considered a violation of academic integrity unless the instructor has specifically given permission. **Recording quiz/exam/assignment questions and sharing with peers who missed the evaluation and must defer is a violation of academic integrity.**

Remember that you are at UVic to learn and to train to become a professional with profound background knowledge and who should be able to think and solve future problems in the society.

Consider the environmental impact due to massive energy consumption every time AI is used.

Grade conversion:

A+ 90-100%; A 85-89.5%; A- 80-84.5%; B+ 77-79.5%; B 73-76.5%; B- 70-72.5%;

C+ 65-69.5%; C 60-64.5%; D 50-59.5%; F <49.5%

In determining final grades for the course, we will round your course score to the nearest whole percent. That is the official course grade that will be submitted for you.

We cannot change your grade for any reason, except if we have made an error calculating it. There is no extra work that you can do to raise your grade.

To pass the course, students must:

- 1) Write a minimum of three out of six **quizzes**
- 2) Write the **final** exam
- 3) **Peer-Teach**

If any of 1 through 3 are not completed, the student will automatically fail the course and receive an "N" ('Incomplete course requirements') on their transcript. An N is a failing grade, and it factors into a student's GPA as 0. The maximum percentage that can accompany an N on a student's transcript is 49. If a student successfully completes 1 through 3, but the overall grade is 49% or lower, they will receive an "F" on their transcript.

How to be successful

-Success is when you are happy and learn. **Attend (!) lectures, listen, take notes and talk in peer discussions/when you have questions.**

-Especially summer courses are intense, and we cover the same material in seven weeks that we usually cover in three months during the fall term. So, staying on top of things is key! It is very important to **keep on track** and to focus on class material.

-If you have **questions**, find answers by 1. checking the course outline, 2. class announcements, 3. asking your peers and 4. Asking me!

-Form **study groups** with your peers: 4-5 students in one group are perfect. Only once you can talk about the material you really understand it.

I want you to know that **off – task activities** such as engaging with friends on social media, and watching only videos, is **negatively affecting students' grades (your own and your peers next to you) by more than 10%³**. I strongly recommend that you **concentrate on your task at hand and turn off/silence your social media during class time and study time to allow you to focus and not be distracted.**

Important Dates

In the UVic calendar you will find a fuller list of important dates, but the ones we have listed below are the ones that will matter to students in Biology 360.

Tuesday May 12: **First lecture** at 8.30 am in Cun146

Monday May 18: Victoria Day, no classes today on campus

Tuesday May 19:	Quiz 1 at 8.30 am in class invigilated, lecture at 8.45 am
Tuesday May 26:	Quiz 2 at 8.30 am in class invigilated, lecture at 8.45 am
Tuesday June 2:	Quiz 3 at 8.30 am in class invigilated, lecture at 8.45 am,
Wednesday June 3	Read the paper for the paper assignment
Tuesday June 9:	Quiz 4 at 8.30 am in class invigilated, lecture at 8.45 am
Wednesday June 10 :	Paper assignment , questions answered in groups during class time
Tuesday June 16:	Quiz 5 at 8.30 am in class invigilated, lecture at 8.45 am
Tuesday June 23:	Quiz 6 at 8.30 am in class invigilated, lecture at 8.45 am
Thursday June 25	Submission deadline for Artistic assignment and optional EDI assignment
Friday June 26:	Last day, Final exam at 8.30 am in class invigilated

Stay healthy!

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. Avoid last minute study panic by working regularly throughout the term: we recommend that you spend at **least 2-3 hours studying after each lecture!** This will help you achieve your goals and cope with stress.

General regulations:

Grading system: In determining final grades for the course, our spreadsheet will round your course score to the nearest whole percent. That is the official course grade that will be submitted for you.

We cannot change your grade for any reason, except if we have made an error calculating it. There is no extra work that you can do to raise your grade.

Please read the appropriate section of the current UVic Academic Calendar regarding your rights and obligations (<https://www.uvic.ca/calendar/>).

You are expected to **observe UVic academic regulations and standards of scholarly integrity** especially with regards to plagiarism and cheating.

UVic instructors are committed to promoting, providing and protecting a supportive and safe learning and working environment for everyone.

I hope that you are enjoying a great summer term with Bio360 Cell Biology!

References:

- 1:** Wagner and Gansemer-Topf, 2005: Learning by teaching others: a qualitative Study exploring the benefits of Peer teaching; WGU Peer learning: Overview, benefits, and models <https://www.wgu.edu/blog/peer-learning2208.html#close>
- 2:** WGU Peer learning: Overview, benefits, and models
<https://www.wgu.edu/blog/peer-learning2208.html#close>
- 3:** Sana et al. 2013, Computers and education 62, 24-31

UVic support centers:

Centre for Accessible Learning - The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <https://www.uvic.ca/services/cal/>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Computer Help Desk If you have any technical issues, please contact the computer help desk via email (helpdesk@uvic.ca) or visit the counter in the CLE building

Counselling Services - Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students. The service is offered by phone.

<https://www.uvic.ca/services/counselling/>

Elders' Voices - The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.

<https://www.uvic.ca/services/indigenous/students/programming/elders/index.php>

Health Services - University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives. UVic Health has transitioned to offering services almost entirely by telehealth.

<http://www.uvic.ca/services/health/>

Office of Student life: student conduct, Student mental health, Sexualized violence awareness,... : <https://www.uvic.ca/services/studentlife/index.php>

Sexualized Violence Prevention and Response at UVic UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out: Where: Sexualized

violence resource office in EQHR; Sedgewick C119, Phone: [250.721.8021](tel:250.721.8021),
Email: svpcoordinator@uvic.ca, Web: www.uvic.ca/svp

Support Connect: 24/7 help by phone or online

<https://www.uvic.ca/student-wellness/contacts/emergency-contacts/index.php#ipn-supportconnect-24-7-help>

Student Wellness Centre to support students' mental, physical and spiritual health

<https://www.uvic.ca/student-wellness/>

End of course outline