Cell Biology Biol360 Fall 2025 – ONE PAGE Summary

- **Everyone is welcome!**

- **Instructors**: Barbara Ehlting, behlting@uvic.ca (course coordinator and lecturer) and Ryan Gawryluk, ryangawryluk@uvic.ca (lecturer)

- **Evaluation**:
  - *Two midterms* (20 & 25%) invigilated online on Oct 9th and Nov 6th 2025
  - *Eight mini quizzes (8% in total, 1% each)*
  - *Final exam* (35%) invigilated online during final exam period in December 2025
    → one page letter sized hand-written study sheet allowed for midterms and final exam
  - *Group Paper assignment* (10%) on Monday Oct 27t in class, read paper before
  - *Artistic assignment* (2%) participation due Dec 1st
  - *Optional EDI assignment* (3%) due Dec 1st (if submitted final exam will count 3% less)

- **To pass the course and avoid an N grade, students**
  - *write minimum of one midterm*
  - *minimum of three mini quizzes*
  - *write final exam,*
  - *submit paper assignment.*

- **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

- **Need help?**
  If you have any questions, here are places to find answers:
  - 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 Fall 2025, CRN 10393

Welcome!

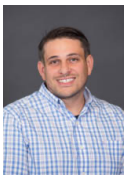
We acknowledge and respect the Lək̓ʷəŋən (Songhees and Xʷsepsəm/ Esquimalt) Peoples on whose territory the university stands, and the Lək̓ʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

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, and strive to make the world a better place.

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

Your instructors

Dr. Ryan Gawryluk
email: ryangawryluk@uvic.ca
Connect: please email to arrange a time



Dr. Barbara Ehlting (Course coordinator, lecturer)
email: behlting@uvic.ca,

zoom link:
https://uvic.zoom.us/my/biol360.officehour?pwd=eFRjYWUzY1hOc2lFL3U3VHc4RS8xUT09
Connect:
- You can always connect with me via email. My goal is to respond within one business day (Monday – Friday). All communication about missed exams or accommodations must be in writing via email, even if an in person discussion occurred.

- 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.

→ 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 rather than complaining.

Designated Class time and location:

Monday and Thursday at 1pm -2.20 pm in HSD A240. Classes start Thursday Sept 4th and end Dec 1st.

Class time is our time together and critical for your active learning journey. I designed this course as an active learning experience with student engagement in form of student presentation, group work and active discussion. It is important that each one of us takes an active part in this class by active listening and asking questions.

Prerequisites:

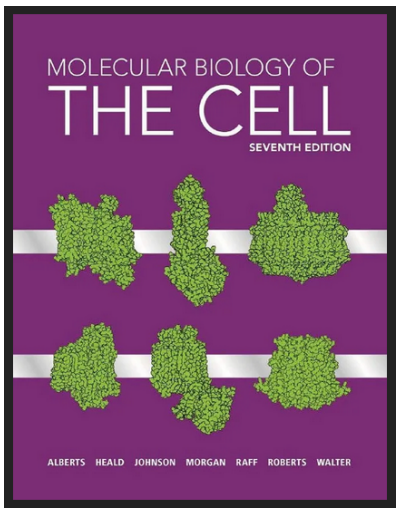
Biol230 OR BME200 and BME201, AND one of Bioc 299, Bioc300A, Bioc300B (Bioc300A or 300B can be taken as corequisites). Please be aware that if you drop a co-req the system will automatically drop you from this course as well! Students who are missing one pre/co-requisite might be allowed to register 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…

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 $223.95,
  9780393884845 $179.50 Loose leaf,
  9780393427080 360 day licence $119.95 E-TEXT
- Etext also available via VitalSource.com and at Norton
  https://digital.wwnorton.com/mboc7
- The UVIC library has the book on reserve.

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.

Lecture notes will be posted on Brightspace (content-> weeks). I recommend that you bring the lecture notes to classes to 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 or distribution of materials to others requires the written permission of the instructor.

Lectures may be recorded with Echo360 (video files) and/or voice (audio files) and posted on Brightspace after each lecture.

Evaluation:

- **Two Midterms** during class time, worth 20 & 25% on Oct 9th and Nov 6th 2025

If you miss one midterm due to a valid reason, please inform the course coordinator (B. Ehlting) ASAP via email. You must write at least ONE midterm to successfully complete this class.

If you miss both midterms, you will have to write a deferred midterm (combined materials covered for midterms one and two).

If you only write one midterm, the final exam will be worth more accordingly.

- **Final exam**: **35% (32% if you do the optional EDI assignment)**, during exam period in December, cumulative. You must write the final exam to complete this course. If you miss the final exam apply for RAC and contact course coordinator (B. Ehlting) via email immediately to arrange for deferred final exam date and location.

All exams (both midterms and final) will
-be **invigilated** and written on your **personal electronic device** on **Brightspace**.
-use **universal design**, and **all students** are allowed **1.5X times** (for a 50 min midterm exam everybody gets 75 min). Students with accommodations with more than 1.5 X must contact Centre for Accessible Learning (CAL) to arrange for exam invigilation.
-allow a **ONE-page hand written letter sized study-sheet** (NO digital version).

- **Mini quizzes** during lectures: **8%** (1% each). There will be 8 mini quizzes on Brightspace on random times during class time (accessible for 24 h). **It is your responsibility to log on to complete and submit the mini quiz on your own electronic device.** If you miss a class, it is your responsibility to complete the quiz at home within 24 h. There will be no deferred mini quizzes.
- **Paper assignment: 10%** completed in groups **during class time** on Monday Oct 27th. You should read the paper beforehand. During the assignment students will answer questions about the paper as a group. There will be no deferred group paper assignment. If you are sick on the day of the assignment, contact course coordinator (B. Ehlting) via email ASAP to discuss options.
- **Artistic assignment**: **2%** participation. Get creative: write a poem with our 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…). Indicate on your submission if

you are ok with the course coordinator (B. Ehlting) presenting your work to the class/in the biology hallway. Look for the submission drop box on Brightspace. Can be done anytime but no later than Dec 1st 2025.

- **Optional *EDI (Equity, Diversity, Inclusion)* assignment** (3% of final grade if submitted no later than Dec 1st 2025). If submitted on time the final exam will count 3% less of the final grade. Identify an injustice or EDI (equity, diversity, inclusion) issue related to cell biology and present your findings in your preferred mode (video, podcast, poem, …). Your work must include substantial amount of information and cite at least two references.

-Students with **accommodations** are encouraged to reach out to the course coordinator (B. Ehlting) via email to discuss options ASAP. Please note: OREM rejects to invigilate online exams.

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 besides the work listed above that you can do to raise your grade.

To pass the course, students must:

1) Write a minimum of **one midterm**
2) Write a minimum of **three mini-quizzes**
3) Write the **final** exam
4) Demonstrate comprehension of scientific literature by answering questions of the **paper assignment**

If any of 1 through 4 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 4, 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. I strongly encourage you to **attend (!) lectures, listen, take notes and talk**. Class time is your time and used be used to ask/answer question and for discussions. 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**!

-If you have **questions**, find answers by checking (in this order) 1. the course outline, 2. class announcements, 3. ask your peers and 4. talk to your instructor!

-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** like checking email, text messaging, checking social network sites, is **negatively affecting students' grades (your own and your peers next to you) by more than 10% [3]. I strongly recommend that you turn off your off – task aps/programs during class time and study time to allow you to focus and not be distracted by social media and other non-course related sites!**

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.

Sept 3th 2025	First day of classes at UVic
Sept 4th:	**First lecture for biol360 at 1 pm**
Sept 16th:	Last day for 100% reduction of tuition fees
Sept 19th:	Last day for adding courses that begin in the first term
Sept 30th:	National Day for Truth and Reconciliation, UVic closed, no lecture
	Last day for paying first term fees without penalty
Oct 9th:	**midterm 1**
Oct 7th	Last day for 50% reduction of tuition fees for standard courses
Oct 13th:	UVic closed (Thanksgiving), no lecture
Oct 27th:	**in class group paper assignment**
Oct 27-31	*10 am – 2 pm Drop by the 5 Day Hub at Petch Fountain (5 Days of action)*
Oct 27	*11.30 am – 12.50 pm Foundations to Equity, Diversity and Inclusion (5 Days of action)*
	1 – 2.20 pm Sexualized Violence Prevention Foundations Series Part 2: Let's talk about Consent (5 Days of action) (lecture will run as usual)
Oct 29	*4.30 – 5.50 pm Sexualized Violence Prevention Foundation Series*

	Part 3: Active Bystander Intervention (5 Days of action)
Oct 30	*10 – 11.20 am Foundations to Equity, Diversity and Inclusion (5 Days of action)*

Oct 31st Last day for withdrawing from first term courses without penalty of failure

Nov 6th: Midterm 2

Nov 10-12: Reading break, no classes

Dec 3rd: Last day of classes

Dec 6-20th: Exam period

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. Mindfulness, meditation and CBT (cognitive behavioral therapy) might help you to stay mentally healthy.

If you are not feeling well, stay at home. If you miss class, you will be able to catch up by watching the video/listen to the audio recording of live classes on Brightspace.

If we as instructors have to stay home, we will deliver course content by pre-recorded lectures.

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 and we as instructors are committed to promoting, providing and protecting a supportive and safe learning and working environment for you and us.

We hope that you are enjoying a great fall 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 Brightspace, 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. Due to covid19 service is now 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/

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https://www.uvic.ca/services/indigenous/students/index.php

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, 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