

Cell Biology, Biol 360, University of Victoria Summer 2021

Goals for this course:

I selected interesting and complex topics of cell biology in order to introduce you with major concepts and working techniques of cell biology. I want you to understand general principles of cell organization, intracellular transport, cell communication, signal transduction pathways & cell cycles including apoptosis. Occasionally I include peer reviewed research papers in order to show you how textbook knowledge is created and how experiments are performed. I want you to understand experimental set up and be able to interpret figures presenting research results. My main goal is to teach you the scientific way of thinking.

Designated Class time:

Monday, Tuesday, and Thursday 10.30 am -12.20 pm. Classes start Monday May 10th and end Thursday June 24th. This term the course will be taught online, so you can expect to see recorded lecture slides posted for each week. I try to arrange class material in **30- 50 min** lecture packages (depending on the topic sometimes a little less/more min) for each lecture. I only expect you to be actually **available in real time on Thursdays at 10.30 am – 12.20 pm** for Q&A class sessions, online quizzes, paper assignment, final exam,.... Other days are flexible.

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! Bioc has a time overlap with this course on Tuesdays, but because our course is taught with no specific time schedule for Tuesdays, you can apply for a 'time override' if you want to consider to take both classes this term.

With whom do you have to deal with?

Instructor: **Dr. Barbara Ehlting** (Course coordinator)

email: behlting@uvic.ca

You can always connect with me via email. My goal is to respond no later than within 24 h on business days.

Teaching assistant: Kara Ruff

email: kararuff@uvic.ca

Kara Ruff will be your marking expert!

How do we connect for interactions?

Brightspace will be used to post lectures, assignments, question forums and more...

I will use **Zoom to connect with you in real time.**

Your guest link for the entire term is

<https://uvic.zoom.us/j/5541110796?pwd=N2pCRjR1cTd0Z0pNckRNNHdzZFZGUT09>

Meeting **ID:** 554 111 0796 (valid for entire term)

Meeting **Password:** UVic (valid for entire term)

Please log in via UVic SSO! If you have privacy issues please contact UVic privacy office.

If you are comfortable please turn on your video, I love to see your faces!

You can interact with me by writing in the chat, raising a hand and asking a question, answering polls, listen to me and others.

Please see more information on Zoom at

<https://www.uvic.ca/systems/services/avmultimedia/zoomvideoconferencing/index.php>

*Orientation session once on **Monday May 10th at 10.30 am:** Let's meet on the first day of class for a little introduction. I am looking forward to get to know you all! All other live interactions will be scheduled for Thursdays.*

Individual office hours: In order to meet on Zoom individually, please send me an email and we will set up a time.

*Class wide Question & Answer sessions on **Thursdays at 10.30 am:** The recorded lectures might not be able to answer all your questions. I therefore invite you to weekly Q&A sessions on Thursdays at 10.30 am via Zoom to discuss class material. If you have questions, please send them to me by email. You can also ask questions during those Q&A sessions by raising a hand and/or in the chat (there is also the Q&A forum on Brightspace).*

Attending Question & Answer session is **highly recommended**, so **EVERYBODY** please log in.

Textbook: Molecular Biology of the Cell, 6th edition, Alberts B, Johnson, A, Lewis J, Morgan, Raff M, Roberts K, Walter P, Garland Science, ISBN 978-0-8153-4432-2

The book is available to you in various forms:

- the textbook can be purchased at the bookstore: NEW, USED, Loose leaf
- Etext is available via VitalSource.com
- etext available at Norton <https://digital.wwnorton.com/mboc6>
- The UVIC library is looking into ebook option.

Lecture notes will be posted on Brightspace (content-> weeks). Recorded lecture slides will be posted in 30-50 min packages, roughly 110 min for each lecture. I recommend that you **listen** to those recordings and **take notes**, 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.**

Tentative Class Schedule

- Welcoming, rules and regulations,
- 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...

How to be successful

I strongly encourage you to use the designated lecture time and listen to the recorded lecture. You should take notes while you listen to the recordings. If you have questions: please ask in the **Q&A forum on Brightspace and/or during the live Q&A sessions every Thursday on Zoom!**

It is very important to keep on track and to focus on class material. 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!

I want you to know that **off - task activities** like checking email, text messaging, checking social network sites, is **negatively affecting students' grades by more than 10%**. **I strongly recommend that you turn off your off - task apps/programs during study time to allow you to focus and not be distracted by social media and other non-course related sites!**

Evaluation:

- Weekly **quizzes 45%** every Thursday (May 13th, 20th, 27th, June 3rd, 10^h, 17th) after the Q&A session **at 11.30 am - noon** on Brightspace (30 min each quiz). **It is your responsibility to log on every Thursday at 11.30 am to complete and submit the quiz within the 30 min time window.**

Exception: on **June 3rd** we will write the **quiz at 10.30 - 11 am** so that there is time for the group paper assignment (see below).

Each quiz is worth 9%. Only the **five best** quizzes (total of 45%) will be used for your final grade (you have one free-bee). You must write at least **FOUR** quizzes to successfully complete this class. If you miss more than **TWO** quizzes alternative forms of evaluation might be necessary.

- **Final exam: 40%**, on last day of class, Thursday **June 24th**, at 10.30 am – 12.20 pm on Brightspace, cumulative.

- **Paper assignment: 10%** (completed in groups online, student will be put in groups on Brightspace. It is your responsibility to connect with peers in your group to work on the group assignment. The paper will be announced in late May, so students have about one week to read it. Questions for the paper assignment will be given on Thursday June 3rd and students have one day to submit their group answers on Brightspace. **On June 3rd we will skip Q&A session and start writing the quiz at 10.30 – 11 am so that your group can work on the paper assignment right after the quiz during class time.** Submission deadline is on **Friday June 4th** before midnight.

- **Q & A assignment: 3%** participation. In this course we will have a Question & Answer forum for **cell biology** related topics. Everybody can post questions and everybody can answer questions. You get a participation mark for posting at least one question (1%) and for answering at least one question (2%) before **June 24th**. This is also a good study tool before quizzes and final exam!

- **Artistic assignment** (or: the unusual assignment): **2%** participation. Get creative: write a poem with our scientific words used in the class, draw 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. Look for the submission drop box on Brightspace. Can be done anytime but no later than Friday **June 25th**.

If you have any **technical issues** using Zoom or Brightspace, please contact the **computer help desk** via email (helpdesk@uvic.ca)

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.

Failure to complete essential components of this course will result in a grade of “N” regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student’s GPA as O. The maximum percentage that can accompany an N on a student’s transcript is 49.

Please read the appropriate section of the current UVic Academic Calendar regarding your rights and obligations.

You are expected to **observe UVic academic regulations and standards of scholarly integrity** especially with regards to plagiarism and cheating. All exams are written at home, so they are all open book exams: you are allowed to consult lecture notes and textbook, however budget your time carefully! The exams (quizzes and final exam) must be taken **individually** and not with a friend/classmate or a group. You are prohibited from sharing any information about the exam with others.

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

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. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. **Especially in those crazy times during this pandemic.**

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

UVic services:

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/>*

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/>*

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.*

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>*

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