Cell Biology, Biol 360, summer 2016

Goals for this course:

I selected interesting and complex topics of cell biology in order to introduce you with major molecular concepts and working techniques of cell biology. We want you to understand general principles of cell organization, intracellular transport, cell communication, signal transduction pathways & cell cycles including apoptosis. Occasionally we include peer reviewed research papers in order to show you how textbook knowledge is created and how experiments are performed. We want you to understand experimental set up and be able to interpret figures presenting research results. We look forward to the continuing studies of the fascinating world of cell biology!

Class time and location: Tue, Wed, Fri 8.30-10.20 am in CorB135. Classes start Tuesday May 10th and end Friday June 24th. Please be aware that the final is on the last day of class!

Prerequisites: 230, Bioc 200 or 299 or pre or corequisite 300A or 300B. Please be aware that if you drop a co-req the system will automatically drop you from this course as well!

Instructor: **Dr. Barbara Ehlting**
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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
- the textbook can also be rented from the bookstore
- a special is offered on garlandscience.com/mboc6. Apply promo code DGL94. This offers 25% off on print books ($126.75 for hardback, $93.75 for loose-leaf)
- ebook is available at garlandscience.com/mboc6-ebook. $50 e-book for 6-month rental (offer expires end of September)

Lecture notes will be posted on a CourseSpaces website for you. I recommend that you bring the lecture notes to classes to add comments on slides and answer questions.

I know that students like to take notes on laptops. HOWEVER, I want you to know that off – task activities like checking email, surfing the internet, checking social network sites, is negatively affecting students' grades by more than 10%. This is true for the student involved in the off task activities, but also affecting students sitting near by (Sana *et al,* 2013). Because of that I please ask you to actively TURN

OFF your internet, email and cellphone during class time!!!

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…

Exams:

Midterm 1	30%	Friday May 27th (50 min during class time, lecture afterwards)
Midterm 2	30%	Friday June 10th (50 min during class time, lecture afterwards)
Final	40%	Last day of class, Friday June 24th, cumulative (110 min)

No electronic devices of any kind will be permitted during the exams.

If you cannot attend an exam for a valid reason (illness, accident, family crisis), it is your responsibility to inform the course coordinator (BE) as soon as possible and provide suitable documentation (doctor's note or counselor's note).

There will be no supplemental midterm exams. If you are excused from a missed midterm test the course coordinator (BE) will inform you how your final course mark will be calculated. In order to pass the course you must write at least ONE midterm and the final exam. You are eligible to write the deferred final exam (date would be announced if necessary) if you have a valid reason for missing the final exam.

Optional class assignment: 10 % (when submitted midterms count 27% each, final 36%)
One - two page summary of a scientific paper published in a peer reviewed scientific journal in 2015 or 2016 discussing a topic related to topics discussed in class. The summary has to follow standard paper format (abstract, introduction, material and

methods, results and discussion). The paper is due on the last day of class before the final is written.

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 at least one midterm and the final exam 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.

It is your responsibility to be aware of ADD/DROP dates published in the Calendar. If you intend to drop this course, please do so officially and give up a space for students who might be on a waitlist.

You are expected to observe UVic standards of scholarly integrity especially with regards to plagiarism and cheating. If you cheat during an exam you will be graded with 0 for this exam and the incident will be reported. Further consequences might apply.

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

Course evaluations are accessible online towards the end of the course. On June 22nd 2016, last lecture day before the final exam, I will reserve time to complete the course evaluations. Your opinion is important to us in order to improve the course for the future.

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