BIOL 225
CRN 31125
Principles of Cell Biology
Summer 2020

Class time and location:

The course will be delivered online in both an archived and live format. Details about *Important Dates and Evaluation*

Instructors:

Dr. Doug Briant
e-mail: dbriant@uvic.ca
extra office hours will be arranged prior to the final exam

Kim Curry
laboratory coordinator
contact information and hours to be announced in laboratory

Required Materials

Textbook: Ninth Edition, Hardin, and Bertoni. *Pearson*, Boston, 2016. You can purchase an e-book version at:
https://www.pearson.com/store/p/becker-s-world-of-the-cell/P100000199282/9780134146621

MasteringBiology course ID: **MBBRIANT2916055**
** This resource is optional. If you purchased a new textbook, it will include an access code for MasteringBiology. A separate access code to the website can be purchased through the book store.**

Lab manual*:* *Biology 225 Principles of Cell Biology, Laboratory Manual*, Summer 2020.

Calculator: Some classes, most laboratory exercises, the midterm test, and the final course exam require the use of a basic scientific calculator that has the following function keys: log, 10*x*, ln, e*x*, *yx* and exp. This type of calculator typically costs about $10-20 and is available in the UVic *Calculator Restriction* below. Please bring such a calculator to your classes and laboratories, in addition to the tests and final course examination. It is your responsibility to have a calculator when needed.

Calculator Restriction quired

you are ***not allowed***
storing or retrieving text, formulas, sounds, or images,

Topics:

	topic	chapters
1	INTRODUCTION - introduction to cell biology	1, 4
2	BIOMOLECULES - cell chemistry and biomolecules	2, 3, 7, 8

Final Exam:

The final (20% of the course total) is a cumulative, open book exam on CourseSpaces. It will be held on Thursday, June 25. The exam will be open from 8:30AM 4:30PM and will take approximately 2 hours to complete (although there will not be a time limit on the exam).

EVALUATION	Date
40% laboratory ***	***based on laboratory components. See lab manual for grading details***
25% online quizzes (five quizzes total, 5% each)	***quizzes available on CourseSpaces Monday, May 18, May 25, June 01, June 08, June 15***
15% Group Work	***Groups meet online via Zoom from 12:30 2:20 Tuesday, May 19, June 02, June 16. Assignment due at end of the session.***
20% final exam	***cumulative, online, Thursday, June 25***

****** since the course includes lab work, you are required to achieve satisfactory standing in both parts of the course and thus you will not be permitted to write the final exam and will not receive credit for the course if you fail the laboratory component of the course.***

TOPIC 5: Signalling 1 Synaptic Signalling

LEARNING OBJECTIVES: in this section, we will describe how impermeability of the cell membrane to ions allows membrane potential to be established. Students will be expected to know how the various ion channels contribute to an action potential by manipulating the permeability of ions.

TOPIC 6: Signalling II Non-neuronal Signalling

LEARNING OBJECTIVES: students will be expected to understand the basic eukaryotic signalling pathways. The importance of regulation, and the complexity of combining signalling pathways will be outlined.

TOPIC 7: Cytoskeleton

LEARNING OBJECTIVES: students should understand the structure and importance of the three main cytoskeletal elements. The dynamic nature of the cytoskelton will be explored and a simple model of motility presented. Finally, the significance of cell-cell and cell-extracellular matrix will be described, and the important signalling pathways underlying these will be introduced.

TOPIC 8: Cancer

LEARNING OBJECTIVES: the epidemiology of cancer was introduced. Students will be expected to form hypotheses about cancer based on this epidemiology. Finally, the underlying causes of cancer will be introduced. Students should be able to correlate the underlying causes with events in the cell cycle of apoptosis.

INFORMATION AND POLICIES

1. plagiarism and cheating. These policies are described in the current University Calendar. All students are advised to read this section.

2. Cell phones, computers, and other electronic devices must be turned off at all times unless being used for a purpose relevant to the class. Students having a cell phone, tablet, or computer on their person during an exam will be assumed to have it for the purpose of cheating.

3. Any recordings of lectures may only be performed with written permission of the instructor, and are for personal use only. The instructor retains copyright to such recordings and all lecture materials provided for the class (electronic and otherwise); these materials must not be shared or reposted on the Internet.

4. Course materials, such as notes, problem sheets, quizzes, examinations, example sheets, or review sheets, may not be redistributed without the explicit written permission of the instructor.

5. Students are expected to be present for the midterm and final exams. Instructors may grant deferrals for midterm examinations for illness, accident, or family affliction, and students must provide appropriate documentation 48 hours after the midterm exam. The deferred exam must be written within five business days of the original exam. The Department of Biology considers it a breach of academic integrity for a student taking a deferred examination to discuss the exam with classmates. Similarly, students who reveal the contents of an examination to students taking a deferred examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Deferral of a final exam must be requested with an Academic Concession form and submitted directly to Undergraduate Records. Deferred final exams for fall term courses will be arranged by the instructor. Deferred final exams for spring term courses will be arranged through Undergraduate Records and must be written before the end of the summer term as stipulated in the University Calendar.

6. Multiple choice scan sheets for machine scoring (bubble sheets) are considered the authentic exam answer paper and will be retained by the department for 1 year.

7. Professors may refuse to review/remark exams not written in indelible ink. In addition, requests for review/remark of a midterm exam must be made within one week of the exam being returned. Students are expected to promptly review midterm exams during scheduled office hours after marking has been completed.

8. Examination papers that have pages removed, or are mutilated will not be marked.

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