UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. **Course: CMMB 531 – TOPICS IN CELLULAR INTERACTION**

Lecture Sections:	L01	TR	09:30-10:45	ST 061	WINTER 2017
Course Coordinator:		Dr. Shemanko			
Instructor(s):		Dr. C. Shemanko	BI 238C	220-3861	shemanko@ucalgary.ca
		Dr. G. Chua	BI 560	220-7769	gchua@ucalgary.ca

Desire 2 Learn (D2L) course name: CMMB 531 L01 - (Winter 2017) - Topics in Cellular Interactions
Biological Sciences Department BI 186; (403) 220-3140; biosci@ucalgary.ca

2. **PREREQUISITE(S):** Biology 331 and one of Biochemistry 401 or 443 or 431.
See section 3.5.C in the Faculty of Science section of the online Calendar
(http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html)

3. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Pre-Group assignment I	10%
Assignment I	20%
Pre-Group assignment II	10%
Assignment II	20%
Class participation	20%
Individual Presentation	20%

There will be NO Final exam scheduled by the Registrar's Office.

Each piece of work outlined above submitted by the student will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in Section 3.6. It is the student's responsibility to familiarize himself/herself with these regulations. See also Section E.3 of the University Calendar

5. **Scheduled out-of-class activities:** Dates and times of approved class activities held outside of class hours. NIL

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** Lecture figures, assignments, papers, and other course material will be posted on D2L

7. **Writing across the curriculum statement:** In this course, the quality of the student's writing in assignments will be a factor in the evaluation of those reports. See also Section E.2 of the University Calendar.

8. **Human studies statement:** indicating whether students in the course may be expected to participate as subjects or researchers. See also Section E.5 of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students are expected to be familiar with http://www.ucalgary.ca/pubs/calendar/current/sc-5-1.html of the on-line calendar.

See also http://www.ucalgary.ca/pubs/calendar/current/e-5.html.

9. OTHER IMPORTANT INFORMATION FOR STUDENTS:

(a) **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under Section K. Student Misconduct to inform yourself of definitions, processes and penalties.

(b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on assembly points.

(c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf.

Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email addy@ucalgary.ca or phone 403 220-3140.

(d) **Safewalk:** Campus Security will escort individuals day or night (http://www.ucalgary.ca/security/safewalk/). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.

(e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also http://www.ucalgary.ca/secretariat/privacy.

(f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; http://ucalgary.ca/provost/students/ombuds

(g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

(h) **U.S.R.I.:** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Department Approval ORIGINAL SIGNED Date_____

Department Approval for
NO Final Exam: ORIGINAL SIGNED Date:_____
M531 co W17; 11/18/2016 3:27 PM

CMMB 531 LECTURE SCHEDULE

DATE	IMPORTANT DUE DATES AND EVENTS	TOPICS
Jan 10		Overview of the epithelium, mammary development
12		Cell junctions and epithelial polarity, Signal Transduction
17		Techniques
19		Paper critique
24		Paper critique
26		Paper critique
31		Paper critique
Feb 2	**Pre-group assignment 1 due** 1. Group work Part A	Paper critique
7	1. interactive Group work part B	Paper critique
9		Paper critique
14		Paper critique
16	**Assignment 1 due**	Paper critique
Feb 19-26	**Reading week**	
Feb 28	**Pre-group assignment 2 due** 2. Group work Part A	Paper critique
Mar 2	**Pre-group assignment 2 due** 2. Group work Part B – prepare posters	Computer lab **BI 182**
7	2. Group work Part B – prepare posters	Computer lab **BI182**
9	2. Poster presentations Part C - interactive	Paper critique
14	Student presentations	
16	Student presentations	
21	**Assignment 2 due** Student presentations	
23	Student presentations	
March 28-30	Student presentations	
Mar 6	Student presentations	
Apr 11-	Student presentations	

CMMB 531

This course covers several areas of cell biology, specifically cellular interactions, with an emphasis on the critical discussion of current literature. There will be some standard lecture formats, but the majority of classes will be discussion based on assigned readings. Penalties of 10% will be docked each day for late assignments.

Pre-Group Assignments
These are one-page summaries with an assigned format. The pre-group assignments will be the basis for group discussions that will help the students in their full assignments. Pre-group assignments must be handed in at the beginning of the class in which they are discussed or they will not be accepted.

Full Assignments
The first two assignments are short essays, in a News and Views style (Nature), which are critical reviews of a small number of articles in the current literature. The essays are limited to 8 pages double-spaced, *Times* 12 point font. They should consist of an introduction to the topic, the overall hypothesis, specific hypotheses, and a discussion of what each of the research papers contributed to the field and how they complement or contrast each other. Include key experimental results. Identify the open unanswered questions and indicate the experimental approaches that could be used to answer the questions. Citations must be referenced using the format found in the journal Cell (full references). References and figures are not included in the page count, however, a 10% penalty will be assessed for each extra half page or page over the recommended guideline.

Group Discussions
There will be classes that will be held in small groups, I preparation for the assignments. No out-of-class time should be required for group activities.
First group sessions: Student groups will be assigned an article and will write a short one-page summary (pre-group assignment) that will be due at the beginning of the first discussion class. In that first class, the groups will meet and discuss the assigned paper. In the second class, groups will mix and present their papers to each other. The written full assignment will be to independently integrate the two papers in a critical review as described under 'full assignment'.
Second group sessions: Student groups will be assigned an article and will write a short one-page summary (pre-group assignment) that will be due at the beginning of the first discussion class. The groups will meet in the first discussion class to discuss the assigned paper. In the next two classes the groups will work on preparing one poster per group for presentation. In the fourth class, students will present their poster and visit the other posters. The assignment will be to independently integrate two of the papers in a critical review as described under 'full assignment'.

Presentations
The presentation length will be 15-25 minutes in length (TBA) with up to 5 min of questions from the audience. Each student will present a critical overview of a scientific article chosen with prior approval of the instructor.

Class participation
There is an emphasis on class discussion in this course, which allows us to better explore the research topics. As noted above 20% of the grade is based on class participation. Students that only attend but do not actively participate will therefore score very poorly in this component. Students are expected to perform all required readings prior to attending each class. Students are expected to participate in discussions, and if called upon, to be able to answer questions on either assigned readings or lecture content.

LEARNING OUTCOMES

Students should be able to learn new aspects of cell biology relating to cell-cell interactions, and the techniques used to discover these aspects.

The student should be able to apply the knowledge from this course and others to interpret and critique the research and conclusions of key scientific articles, alone and in groups.

The student should be able to communicate ideas in oral and written format, presenting clear summaries, critical evaluation, and problem solving ideas.

Letter Grade	Cut-Off
A+	90+
A	85
A-	80
B+	77
B	73
B-	70
C+	67
C	63
C-	60
D+	55
D	50
F	<50