



## COURSE OUTLINE

### 1. **Course:** CMMB 531, Topics in Cellular Interactions - Winter 2023

Lecture 01 : TR 09:30 - 10:45 in TI STUDIOB

<b>Instructor</b>	<b>Email</b>	<b>Phone</b>	<b>Office</b>	<b>Hours</b>
Dr Carrie Shemanko	shemanko@ucalgary.ca	403 220-3861	BI 238C	TBA

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

#### **In Person Delivery Details:**

All lectures this term are planned in-person. Lack of attendance will be considered on a per case basis. Missed class participation can not be made up.

#### **Re-Entry Protocol for Labs and Classrooms:**

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found [here](#).

#### **Course Site:**

D2L: CMMB 531 L01-(Winter 2019)-Topics in Cellular Interactions

**Note:** Students must use their U of C account for all course correspondence.

#### **Equity Diversity & Inclusion:**

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

The Biological Sciences Equity Committee acknowledges there are persistent barriers that prevent such accessibility and hinder our progress towards EDI. Our representatives (faculty, staff, postdocs, graduate and undergraduate students) are committed to addressing any concerns and work towards proactive solutions that enact necessary change within the department. To submit anonymous questions, comments or concerns regarding EDI related issues, please reach out to our Chair, Constance Finney ([constance.finney@ucalgary.ca](mailto:constance.finney@ucalgary.ca)), or a committee representative of your choice at <https://science.ucalgary.ca/biological-sciences/about/equity-diversity-and-inclusion>

### 2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

#### **Prerequisite(s):**

Biology 311 and 331; and 3 units from Cellular, Molecular and Microbial Biology 411, Biochemistry 443 or 431.

### 3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Class participation <sup>1</sup>	20%	Ongoing		
Individual presentation <sup>2</sup>	20%	Ongoing		
Pre-group assignment 1	10%	Feb 02 2023		
Assignment I	20%	Feb 14 2023		
Pre-group assignment 2	10%	Feb 28 2023		
Assignment II	20%	Mar 23 2023		

<sup>1</sup> Details provided below and on D2L

<sup>2</sup> Students pick from a range of possible dates.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component 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.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
<b>Minimum % Required</b>	92 %	88 %	84 %	80%	76%	72 %	68 %	64%	60%	56 %	50 %

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

#### 4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

Missed components will receive a zero. Accommodations will be made on a per case basis and are not guaranteed. Pre-group assignments will not be accepted if late. Full assignments will be docked 10% per day late.

#### 5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.

#### 6. Course Materials:

Course materials will be given in class and on D2L.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

#### 7. Examination Policy:

No aids are allowed on tests or examinations.

Students should also read the Calendar, [Section G](#), on Examinations.

## 8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

## 9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

## 10. **Human & Living Organism Studies Statements:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

**STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.** Students taking laboratory and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with [Section SC.4.1](#) of the University Calendar.

## 11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

## 12. **Other Important Information For Students:**

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](#).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email ([svsa@ucalgary.ca](mailto:svsa@ucalgary.ca)) or phone at [403-220-2208](#). The complete University of Calgary policy on sexual violence can be viewed [here](#).
- d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

e. **Student Union Information:** [SU contact](#), Email your SU Science Reps: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca), [science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca),

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.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, by filling out the [Request for Academic Accommodation Form](#) and sending it to Lisa Gieg by email [imgieg@ucalgary.ca](mailto:imgieg@ucalgary.ca) preferably 10 business days before the due date of an assessment or scheduled absence.

g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)  
[Student Academic Misconduct Policy](#) and [Procedure](#)  
[Faculty of Science Academic Misconduct Process](#)  
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP). 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 [Legal Services](#) website.

j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

#### 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 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 6 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. Discuss 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. Late assignments are docked 10% per day.

### Group Discussions

There will be classes that will be held in small groups, in preparation for the assignments. No out-of-class time should be required for group activities.

First group sessions: Students will be assigned an article and each person will independently 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, small groups will form that shared the same paper, and discuss their assigned paper. In the second class, the smaller groups will present their papers to another group who chose a different paper and vice-versa, followed by discussion. The written full assignment will be to independently integrate the two papers in a critical review as described under 'full assignment'.

Second group sessions: Students 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 small groups will meet in the first class to discuss the assigned paper. In the next class the groups will work on preparing one poster per group for presentation. In the third class, students will present their poster to a group that had a different paper, and vice-versa. 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, ask questions of fellow students after their presentation, and if called upon, to be able to answer questions on either assigned readings or lecture content.

### 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	
7	1. interactive Group work part B	
9		Paper critique
14	Assignment 1 due	Paper critique
16		Paper critique
Feb 20-24	Reading week	
Feb 28	Deadline for presentation article selection Pre-group assignment 2 due 2. Group work Part A	
Mar 2	2. Group work Part B - prepare posters	
Mar 7	2. Poster presentations Part C - interactive Group work	
9		Student presentations
14,16		Student presentations
21, 23	Assignment 2 due March 23	Student presentations
28, 30		Student presentations
April 4,6		Student presentations
Apr 11		Student presentations

**Course 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

Electronically Approved - Dec 21 2022 16:14

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**Department Approval**