

BIM 7021 Conférences en Biologie du Cancer

This course consists of four 1-credit courses that can be taken separately: BIM 7021 A, B, C and D

Each course comprises 6 Monday seminars, 4 of which will have classes meetings before the lecture BUT attendance all lectures is mandatory.

Coordinators for Winter 2018

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The course consists of a series of weekly seminars in both the autumn (courses A and B) and winter (courses C and D) semesters. Because it is impossible to invite high profile researchers to present seminars prepared specifically for a graduate course on cancer, the research topics of the seminars are not all directly related to cancer, but a substantial number of speakers will emphasise the links between their research and cancer. In addition, we give you the option to write reports about the seminars that interested you most (see below).

Course objectives

There are three main objectives of the **BIM7021** courses.

The first aim is to improve your communication skills by giving presentations to colleagues who are not experts in the field.

The second objective is to fine-tune your ability to follow the arguments and the results presented in research papers and seminars, as well as exercise your critical judgment in assessing the validity of their main conclusions.

The third aim is to expose you to a broad range of techniques and experimental systems that represent the current state-of-the-art in modern research.

Course operation

For the course **BIM7021C**, at 10:00 am for 4 weeks (Jan.29, Feb.12, Feb.19, Feb.26), we will meet for a round-table journal club to discuss a paper related to that week's seminar. Each week, **one student will be assigned to open the discussion with a 10-minute introduction** into the paper and briefly (5-7 minutes) summarize the paper (~15 min total). The presenter will ideally have no more than 3-4 Powerpoint/Keynote slides for a general introduction. They should also have a PDF version of the paper to *very* briefly highlight what was done (if required) and so that the group can follow along with the figures. **2-3 other students will be selected each week as "discussion leaders"** and they will independently prepare critical discussion points to raise with the group.

The role of the presenter is to provide a review of background information for the paper. The role of the discussion leader (DL) is to help guide the group in critically assessing the paper putting and putting the results into context. The DL *must* be prepared in advance and have some ideas of what points they will raise. To ensure this is done,

10% of the DL's mark will be for submitting a brief overview of some of the points they will raise by 11:59pm on the **Friday before the Monday** seminar.

All other students will participate in the discussion that will be moderated by the instructor, who will also ask questions. Because anyone may be called upon, it will be necessary to be able to discuss all the figures or else risk losing marks for not being prepared.

At 11:30 am, we will all attend the seminar. Attendance is mandatory.

Courses evaluation

In addition to leading a paper discussion, within each course you will also need to complete 2 written reports based on the weekly invited seminars. The marking scheme per course will be as below:

a.	Oral presentation/Discussion leader	35%
b.	Journal Club Participation	10%
c.	Written reports	45%
d.	Lecture attendance	10%

For each course the components above will be graded as described below

1) One **oral presentation/discussion leader (35% of final grade):**

Language of the presentations: We strongly encourage you to present in English. For better or worse, this is the most widely used language in science and increasing your scientific fluency will increase opportunities for your future research career. If, however, you don't feel confident to present in English, please indicate the language of your presentation in your E-mail to Pascale Le Thérizien (see below).

Papers that will form the basis of oral presentations: At the beginning of the course, you will be randomly assigned **weeks & papers** for which you will be responsible for presenting an introduction to the topic and summarization of the paper.

At least four days before your oral presentation please E-mail:
pascale.le.therizien@umontreal.ca

In this E-mail, please tell Pascale whether:

- 1) Your presentation will be in English or in French
- 2) You will bring your own laptop or not
- 3) If you don't have a laptop, please tell Pascale whether your presentation will be prepared on a Mac or a PC.

Content of the presentations (intro):

A general introduction to the research topic. Our main criterion for evaluation is that your introduction is very clear to people outside the field.

What is the main question that is being addressed in the paper? Were you able to correctly identify the key questions that the authors sought to address? And how does each figure help in addressing this main question? You should be prepared to join the discussion of all figures even though you will not be assigned to them (participation mark).

Content of the presentations (discussion leader):

What was the most important conclusion reached by the authors and, in your opinion, did their data support that conclusion?

If you feel that they did not, please explain why. You will not have time to mention details (minor issues with the quality of the data), but only major issues. You will not get high marks if you simply say: "Yes, I agree that all the data completely support the conclusions made by the authors". If that is the case, please end your presentation by adding one of the following points:

- a) An alternative conclusion (different from the one made by the authors) that is compatible with the data presented by the authors.
- b) An additional experiment or an alternative approach that would significantly strengthen the main conclusion of the paper.
- c) Assuming that you judge the main conclusion to be correct, describe what could be done to advance this field of research beyond what was presented in the paper.

2) Participation! (10% of final grade)

At every class, every student will be expected to participate in the discussions about the paper.

3) Two written reports (45% of final grade):

In order to develop your skills of critical analysis, you will write, for each course, **two** written reports **pertaining to the journal club paper**. These reports will be due at 9am the day of the related seminar.

We anticipate that some seminars will not be in areas of research that are interesting to you. Therefore, we give you the opportunity to choose which seminars you write a report about. Having said that, we do not recommend that you skip several weeks without writing any report. You are entirely responsible for submitting **2 written reports for each course**. If you send us fewer than **2 reports within a given course**, your final mark will be calculated as if each missing report received a 0 (zero).

Written report format: For each of the **two** topics that you selected, you must submit a report following the format indicated below. You will find a pre-formatted MS Word template sheet for your written reports. The template is divided into sections in which you will be able to provide the sort of information that is mentioned above. To ensure that the evaluation of the reports is as fair as possible for all the students, we will not accept any report that does not conform to the outline provided. Your reports will need to be submitted *in Microsoft Word* format on Studium.

Written report content: The goal of these reports is to demonstrate critical thinking. Your report **should not** be a summary of the paper but a critical assessment of either:

- 1) What should be done to follow-up what was done in the paper
- 2) What should have been done to correct serious flaws in the original study

Background and Rationale:

This section should consist of two sentences of Background, the first more general, the 2nd getting more specific about the void in the field you intend to fill. Then the 3rd sentence should state explicitly the rationale as to why it is important to test the specific hypothesis that you propose in the next section. Something like "However, it is not known whether..."

Hypothesis:

It is not acceptable to use a hypothesis made in the paper. (The same holds true for the Rationale section.) Please state an original hypothesis.

It is important that the hypothesis poses an explicit question and is not simply "The authors' findings will be true in cancer cells too" or "The findings will also be true in another species animal model." Such "hypotheses" are unacceptable.

It is also unacceptable to propose a screen or any other type of "fishing expedition" approach. "We will find something interesting in the screen" is not a mechanistic testable hypothesis.

Predicted results and implications:

This section should not simply contain statements that anyone can make like "This work will help our understanding of cancer development or provide new ways to treat cancer." **This sort of argument in the "Implications" section will get poor marks. This may prove to be the case (after many years of hard work), but this is not what we want you to describe in the "Implications" section.**

The Implications should relate directly to your predicted results and how they lead to a future round of hypothesis-driven experimental science. How has your proposal (and predicted results) helped move the field forward? Where would it lead the field? Would your expected results force researchers to reconsider the validity of a dogma that was not firmly established by sound experimental evidence? Would your expected results help bridge two areas of research that were not known to be inter-related or connected to each other?

4) Attendance of the seminars (10% of final grade)

Attendance of all the pre-seminar classes and seminars is mandatory. For each absence without an appropriate justification (medical excuse or similar), you will lose 5% of your final mark. At the end of each seminar, you will need to sign a presence sheet in the front of the seminar room.

Numerical Evaluation and conversion to letter grade:

Final mark:		Passable	
Excellent		65.0-69.9:	C+ (numerical value : 2.3)
90.0 and above:	A+ (numerical value : 4.3)	60.0-64.9:	C (numerical value : 2.0)
85.0-89.9 :	A (numerical value : 4.0)	57.0-59.9:	C- (numerical value : 1.7)
80.0-84.9:	A- (numerical value : 3.7)	54.0-56.9:	D+ (numerical value : 1.3)
		50.0-53.9:	D (numerical value : 1.0)
Good		Weak (fail to pass)	
77.0-79.9:	B+ (numerical value : 3.3)	35.0-49.9:	E (numerical value : 0.5)
73.0-76.9:	B (numerical value : 3.0)	0.0 – 34.9:	F (numerical value : 0.0)
70.0-72.9:	B- (numerical value : 2.7)		

BIM7021 Written Report

Student's name:

Date:

Please use this document as an outline for your written report. Enter the corresponding sentences into each box, keeping within the sentence number guidelines per section, and within a page total. You should find that the boxes expand as you type, and that the contents should remain single-spaced. Please do not alter the vertical lines or the margins, font size or font.

(Note that part of your grade will be gained by infusing your report with excitement and creativity. As with paper and grant writing, it is important to have the element of "good storytelling.")

Report sections	(here's where you put your part: ↓)	Grade
Background and critical assessment (4-6 sentences)		/20
Hypothesis (1 sentence)		/10
Methodology, conditions including controls (8-10 sentences)		/50
Predicted results and implications (2-4 sentences)		/20
		/100