University of Ottawa – Biology Department
BIO1140 – INTRODUCTION TO CELLULAR BIOLOGY
Winter 2017

This is the second 1000 biology course offered. If you have taken BIO1130, you have discussed various aspects related to the diversity of living organisms. In this course, we will discuss the basic mechanisms of molecules and cells that make up those organisms.

Course description:

This course includes a laboratory portion where you will put into practice some of the theoretical concepts discussed during the learning sessions. Topics of the learning sessions will focus on these main areas: Chemistry of life; Structure and function of cells and organelles; Organization, replication and expression of genetic material; Cell cycle; Intracellular traffic; Extracellular matrix and intercellular communication; Cellular signal transduction.

Schedule (In class learning sessions):

Section A:	Tuesday	11:30am-1pm	Marion Hall MRN
	Friday	1 – 2:30pm	Marion Hall MRN
Section B:	Monday	8:30 – 10 am	Marion Hall MRN
	Thursday	10 – 11:30 am	Marion Hall MRN
Section C:	Monday	2:30 – 4 pm	Marion Hall MRN
	Thursday	4 – 5:30 pm	Marion Hall MRN

Professor/Key Contributors:

Please note that to meet with us outside drop-in hours, it is preferable that you make an appointment, by email (using your **@uottawa email**) and indicating BIO1140 in the subject line. You can also send questions by email; make sure they are clear and concise. Please allow up to 48 hours to obtain a response (given the large number of students).

Dr. Caroline Petit-Turcotte
145 Séraphin Marion # 102
Email: cpetittu@uottawa.ca
Twitter: @CPetitTurcotte use #BIO1140
Drop-in hours: Come by to discuss the course, ask questions, get some study tips, etc.
Monday, 10h30 to 11h30; Thursday, 1h30 to 2h30

Dr. Fabien Avaron (Laboratory coordinator)
Biosciences BSC 106
Email: fabien.avaron@uottawa.ca
Drop-in hours: Friday 10h30 to 12h; open door policy the rest of the time
Lab website: http://www.biolab1.uottawa.ca/BIO1140/

Marc Charette (Large class coordinator)
Gendron GNN 281
Email: marc.charette@uottawa.ca
Office hours: Tuesday 10h to 11h

University of Ottawa – Biology Department

Course objectives:

At the end of this course, you should be able to;

- Identify, use and define the relevant scientific terms describing cellular structures and processes.
- Illustrate and interpret general concepts discussed during the course, namely through the laboratory experiments.
- Organise and structure biological observations and analyse them to confirm or refute general concepts.
- Choose and recommend appropriate observation techniques according to the level of cellular organisation of interest.
- Analyse, criticize, and relate scientific material stemming from popular literature.

Research:

During this course, students will be asked to participate in a research project assessing concept inventories and learning in Biology. Participation is not mandatory, and the research will be conducted in-class, in a questionnaire format. Results of the research, as well as participation to the research project, will have no impact on the student's grade for the course.

Teaching assistants (TAs):

TAs will be available to answer questions online during and after each learning session (via the Echo360-ALP discussion window). TAs will also be providing feedback when marking the weekly online-DGD questions. These will be discussed later in this syllabus.

Blackboard Learn and Active Learning Platform from Echo360 (Echo360-ALP)

The course will be managed via Blackboard Learn; there you will find all course information, additional material, the course syllabus and calendar, access to the weekly online-DGDs (directed discussion group) etc. The learning sessions will be presented using a free, cloud-based tool, called the Active Learning Platform from Echo360 (Echo360-ALP). There will be short registration instructions on BBLearn to walk you through setting up your access to the Active Learning Platform. You will receive an invitation email via your @uottawa account, so that once your Echo360 account is created (**using your @uottawa email only**), you can link directly to the learning sessions for BIO1140. When logging on the Echo360 Active Learning Platform via the logon page, please select the EMEA server, located on the top right hand corner of the page. From this platform, you can access the slides, take notes, send questions and contribute to the discussion during or between classes via the chat window, view the podcasts, etc. This platform also provides interactive activities which we will use in every learning session. You will need to log on to Echo360-ALP for each session (using a smartphone, laptop, tablet, etc.). Participation is **free** but it is **mandatory**.

> Students are responsible for participating in the BIO1140 section that they are officially registered in. Therefore, participating in a section that you are not registered in **will not count** towards your participation marks. If you switch sections during the term, you must immediately advise marc.charette@uottawa.ca to be invited to your new section and participate in your new section. You must also register to Echo360-ALP using your @uottawa email only – otherwise, you **will not** be attributed any participation marks as we cannot verify your identity.

Podcasts: Learning sessions will be recorded and podcasts will be made available on Echo360-ALP in the days following the lecture. Please note that technical issues have been known to occur, therefore some recordings may be unavailable. Do not rely solely on the podcasts – come to class.

Online discussion chat rooms: Within Echo360-ALP there is a discussion window, where you can post questions or comments, during or between learning sessions. An area on BBLearn will also be available so you can suggest topics to be discussed in the learning sessions or use these to discuss and share with your colleagues. In all instances, you are expected to use these tools in a respectful manner and for course-related discussions. If you fail to use these tools in a respectful manner, you will face academic penalties regarding your participation marks or other penalties imposed by the Vice-Dean of the Faculty of Science.

Announcements: The announcements via BBLearn will be the conduit to send information to students during the semester (Changes, Discussions, News, Exam information, etc.). It is your responsibility to manage your notifications settings in BBLearn so that you receive the proper notifications and check the course page on BBLearn on a daily basis.

Online Directed Group Discussions (DGDs): Weekly DGD questions (these are not mandatory) will be made available on BB Learn; they will focus on a given topic related to that week's learning sessions, and will allow you to get direct formative feedback on how well you understand the material. This course focuses on **integrating** the material rather than memorisation. Short and long answers that require an explanation or justification are often identified as areas student find difficult to master – therefore the main focus of these exercises is to provide students with an additional tool to practice writing out complete and concise, well organised answers, while getting feedback simulating how such questions would be evaluated on an exam. Answers will be marked and feedback will be provided by your section's TA. A document providing tips on how to make the most of the DGDs will be available on BB.

Textbook requirements:

There is no mandatory textbook to purchase for this course. HOWEVER, there are assigned readings, in the form of weblinks, articles, or other (see SmartBio below), which MUST be completed BEFORE each learning session. This is to ensure that you have a sufficient level of background to be able to **actively engage and participate** in the interactive activities and contribute to the discussions in class, and to ensure that you get the most out of each learning session. I will not be reviewing the material assigned in the readings but rather leading the session so that you can put that knowledge in context and use it. You may find that you need to go back and read certain portions again. It is encouraged that you use the readings, the learning sessions, DGDs, and/or study groups, in order to *practice integrating the material*.

SmartBio: For one section of the course (Cell communication and signal transduction), we will also be using SmartBio, a collection of animations and online exercises and quizzes. You will need to register to this website for a minimal fee (25$). Details will be provided on BB.

Suggested excellent reference texts: (Some figures in the lecture slides will be taken from these textbooks)
Biology – Campbell; Reece et al
Essential Cell Biology – Alberts et al
Molecular cell biology – Alberts et al
Cell and molecular biology – Karp et al
The world of the cell – Becker et al
The last 3 (in bold) are particularly good reference textbooks; if you plan on pursuing in cell biology, any of them will be useful for other biology courses but also for future reference (so any of these is a good investment if you want to buy a textbook).

There are also a large number of excellent reference books available online at: http://www.ncbi.nlm.nih.gov/books

Laboratory component:

There are 5 labs during the semester. They take place in the afternoon from 2:30 to 5:20PM on the 3rd floor of the BSC building. The 1st lab will start during the week of Jan-16 and will run for 2 weeks. Visit the lab website at www.biolab1.uottawa.ca/BIO1140/ and read the lab manual introduction for more information. The laboratory manual is **mandatory** and is on sale in UCU0024 or can be downloaded from the laboratory website (which you can access from BBLearn).

Evaluations:

This course is worth 3 credits. You must obtain a mark equal or greater to 50% to pass the course. ***Midterm exams will be held on Saturday mornings.*** **Midterm 1 will be held on Saturday February 4th, while Midterm 2 will be held on Saturday March 18th. Both exams will be held in the morning, times to be confirmed on BBLearn.**

Evaluations will be weighted as follows:

Course participation	Up to 10% based on your level of participation during learning sessions to Echo360-ALP activities, AND 2 online quizzes *
Midterm exam 1	15% (Material from first 4 weeks – to be confirmed in class and on BBLearn)
Midterm exam 2	15% (Material from approx. weeks 5 to 10 – to be confirmed in class and on BBLearn)
Laboratory portion	25%
Final exam (**Cumulative**)	35% **All course material** will be covered on this exam

** The class participation mark will be calculated as a proportion of your level of participation throughout the semester,* ***in the section that you are officially registered in, only if you registered with your @uottawa email,*** *whereby to obtain the full 10%* ***in-class*** *participation mark, you must actively participate in at least 90% of the learning sessions. Participation does not equate to accurate answers but actively engaging in the activities carried out via Echo360-ALP* ***during*** *the learning sessions. In addition, 2 online quizzes will be made available in the first portion of the course – completing both quizzes online will give you the equivalent of 1 lecture participation mark (ie if you miss a lecture but complete both quizzes, it does not affect your participation). Failing to participate in 90% of the lectures will result in obtaining a proportionately decreased participation mark.* ***Please disregard the 'attendance' score in ALP as it takes into account many variables and is not an accurate reflection of your participation****. At the end of the semester, we will be calculating your participation based on the activities that you completed* ***during*** *each learning session.*

Exams will be a combination of multiple choice questions, short answers, associations, identification, as well as long answer (comprehensive) questions that require you integrate the different course concepts.

During exams, students are prohibited from using electronic devices or any other communication tool that has not been approved beforehand. ***Any such device or tool must be shut off, stored and be out of reach****. Anyone who fails to comply with these regulations may be charged with academic fraud, as per regulation 9.4, Conduct of exams.*

For all students registered with SASS writing an alternate exam: in order to have your alternate exam registered with Access Services and obtain your accommodations, you are required to give a minimum notice of 11 complete business days to Marc Charette. Without such notice, we cannot register alternate exams with SASS and students will not be able to receive their accommodations. For students that have a legitimate reason for **missing a midterm exam, which include but are not limited to religious reasons, university sporting competitions,**

academic conflicts, you must provide a justification letter to Marc Charette. *Please note that work is not a valid justification for missing a midterm exam.* The alternate exams are scheduled for Midterm 1 on Friday, February 3rd and for Midterm 2 on March 17th. Both will be held from 8:30-9:45am in FTX 133. You must have prior approval from Marc Charette to write the alternate exam.

Missing a midterm exam must be justified. You must notify the professor or Marc Charette with a written justification. This written justification may be provided electronically. Only Marc Charette and the professor will determine if the absence is justified. Please see regulation 9.5 for Justification of absence from an examination http://www.uottawa.ca/about/policies-andregulations/academic-regulations#.

> PLEASE NOTE: **For all cases of a justified absence to a midterm, the weight of the exam will be added to the weight of the final exam. In the case of an unjustified absence to the exam, you will receive a mark of 0 for that exam.**
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> All medical certificates must be submitted to either Marc Charette or the professor **no later** than *5 business days following the absence*. All medical certificates must be accompanied by a completed Consent to Release Personal Health Information Relating to Medical Notes form, available on the course website on BBLearn, so that it may be validated by the University of Ottawa's Health Services.

You are strongly advised not to make travel plans for the summer until the final schedule for final exams has been posted; we have absolutely no control over scheduling of the final exam. Final exam deferrals must be arranged with the Office of Undergraduate Programs of the Faculty of Science. They take place in July (see last section for dates).

Students considering to register with Access Services should contact them as early as possible in the term.

Handing back midterms and final exam consultation sessions:

Midterms will be handed back by a TA at various sessions in the 1st floor lobby of BSC. Please note that picking up your midterms outside these specified sessions is not possible, so please ensure that you attend one of them if you want your midterm. Due to provincial privacy legislation, you will need to present your UOttawa student ID card or UPass to pick up your exam; no exceptions.

You will be allowed to consult your final exam during sessions that will be held during the month of May. The schedule will be posted on BBLearn once final exams have been marked. If you want to consult your final exam you will need to present yourself at one of these sessions and provide your UOttawa student ID card or UPass; no exceptions.

Midterm and final exam remarkings:

All exam remarking submissions are governed and subject to Academic regulation 10 (Grading system), more precisely subsection 10.3 - Revision of grades and appeal.

In this course, we have set up a remaking procedure that allows students to make a written appeal of their midterm or final exam mark, prior to embarking on a formal First Stage Grade Review. Students are required to specifically identify questions for which they have potentially detected an issue in the marking. A written rationale is required, on the back of the last page of the exam, and must specifically compare the text in the

exam that has potentially been incorrectly marked and the corresponding portion on the marking scheme. All midterm/final exam remarking appeals must be handed in to Marc Charette (GNN 281) prior to the specified deadline, without exception, and will be remarked by Marc Charette. Remarking can increase, decrease or result in no change to the mark originally awarded. When the remarking process is complete, you will be notified via an announcement on the course website. Therefore, please do not contact us regarding the progress of the remarking process.

First Stage: Grade Review

This is a formal process by which the student appeals directly to the Chair of the Biology Department. Please note: this process has strict time limits, it is resource intensive for both the Chair, the professor and the student and should not be embarked on lightly. However, it is your right to trigger this process if you so choose. It is an inappropriate process for students to use if solely looking to increase their final grade letter in the course. More details can be found at http://www.uottawa.ca/administration-and-governance/academic-regulation-10-grading-system.

Students obtaining **a final mark of E may be eligible for a supplemental exam** – please contact the Office of Undergraduate Programs of the Faculty of Science to verify if you are indeed eligible AND to register for the exam.

Also, please take note of the University of Ottawa Regulation on academic fraud (see section 14.2 at http://www.uottawa.ca/about/policies-and-regulations/academic-regulations#). Note that plagiarism, i.e. use of another person's words, ideas or statistics without acknowledgement of the source, is unacceptable.

Attendance / Respect

Attendance is strongly suggested as the content presented on BBLearn is not sufficient, and you will miss the opportunity to participate and contribute in the active learning exercises and discussions. You are expected to show respect during and outside class, in all types of communications. In addition, do not rely on podcasts as sometimes, more often than we would like, technology does fail us….

And lastly….

Important deadlines for the Winter 2017 term

January 9 Classes begin
Saturday February 4th AM – Midterm 1
February 19-25 Study week (No classes)
Saturday March 18th AM – Midterm 2
March 24 Last day for withdrawal from a course
April 8 Classes end
April 11-28 Final Examinations.
It may be necessary to schedule examinations during the day for classes held in the evening, and vice versa. Exams may also be held on weekends (day or evening).
June 13-17 Application period to write a supplemental/deferred examination – check with Faculty
July 5-10 Exam period for deferred and supplemental examinations

Have a great semester!