Université of Ottawa – Biology Department
BIO1140 – INTRODUCTION TO CELLULAR BIOLOGY
Winter 2015

This is the second biology course offered during the first year. 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 lectures. Topics of the lectures will focus on these main areas:
Origin and 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 signalling.

Schedule (In class lectures):

Section A:	Tuesday	11h30 – 13h	Marion Hall MRN
	Friday	13h – 14h30	Marion Hall MRN
Section B:	Monday	8h30 – 10h	Marion Hall MRN
	Thursday	10h – 11h30	Marion Hall MRN
Section C:	Monday	14h30 – 16h	Marion Hall MRN
	Thursday	16h – 17h30	Marion Hall MRN

Professor/Key Contributors:

Dr. Caroline Petit-Turcotte
Gendron GNN 170
Email: cpetittu@uottawa.ca
Office hours: Monday, 10h30 to 11h30; Thursday, 13h to 14h

Dr. Fabien Avaron (Laboratory coordinator)
Biosciences BSC106
Email: fabien.avaron@uottawa.ca
Office hours: Tuesday 10h30 to 12h;
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

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

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Research:

During this course, students may be asked to participate in a research project assessing concept inventories in Biology. Participation is not mandatory, and the research will be conducted once, 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 (BBLearn discussion chat rooms and/or email). Their contact information will be made available on BBLearn. They will also provide a weekly discussion group (Room to be posted on BBLearn). These DGDs are a great way to get feedback on how well you understand the material covered in the text and lectures. TAs will present sample questions (short or long) on which you can work on and get immediate feedback on your answers.

Blackboard Learn and Lecture Tools

The course will be managed via Blackboard Learn; you will find lecture slides, additional information, discussion chat rooms, the course syllabus and calendar, info on discussion groups (DGDs), etc. The lectures will be presented using a free, cloud-based tool, called Lecture Tools. You need to create an account, using University of Ottawa (and NOT Ottawa University). There will be a short video on BBLearn to walk you through setting it up. You will find an invitation link on Blackboard Learn, so that once your Lecture Tools account is created, you can link directly to the lectures for BIO1140. From this platform, you can access lecture slides, take notes, send questions during or between classes, etc. This platform also allows interactive questions which we will use in class. You will need to log on to Lecture Tools for each lecture (smartphone, laptop, tablet, etc.).

Lecture slides: Slides for each lecture will be placed on Blackboard Learn (Powerpoints and/or PDF) and Lecture Tools.

Contact: Contact information for the professor and key contributors will also be made available on Blackboard Learn.

Announcements: This will be the conduit to send information to students during the semester (Changes, Discussions, News, Exam information, etc.). Whenever possible, an email will be sent but it is YOUR responsibility to check the course page on Blackboard Learn on a daily basis.

Online discussion chat rooms: You can suggest topics to be discussed or ask questions to your colleagues.

Discussion groups DGDs: Weekly DGD sessions (these are not mandatory) will be held by TAs; they will focus on a given topic related to that week's lectures, and will allow you to get direct feedback on how well you understand the material. Short and long answers are often identified as areas student find difficult to master – these sessions are an additional tool for you to practice writing out complete and concise, well organised answers. The schedule for the DGD sessions will be posted on BBLearn.

Podcasts : Lectures will be recorded and podcasts will be made available on Blackboard in the days following the lecture. You will need to have an Echo360 account (free – use uOzone logon info).

Suggestions: An area in the discussion chat rooms on BBLearn will be available to you to make comments and/or suggestions on the course content, or any other aspect related to the course. These comments can be made anonymously if you so choose.

Textbook

Lectures / Theory: (Mandatory)

Biology: Exploring the diversity of life, Second Canadian edition, Peter J. Russell *et al*, Nelson Education Ltd.
This is the text also used for BIO1130. It covers the material that will be discussed in class, and is a good reference textbook for the laboratory portion of the course, as well as other courses of the curriculum. It is available at the library bookstore.
To increase the relevance of the course material, we will also include material from the scientific literature and references from on-line texts.

It is very important that you have the text (in hardcopy or electronically) and read it. We will use figures directly from the text in lectures, and they will be provided as slides on the website, but the quality is poor compared with the text. In addition, cell biology like all scientific endeavours is a huge field and it cannot all be covered within the lectures - the text functions to supplement the lectures. The text includes self-test questions at the end of each chapter, and these or something like them, could appear on an exam. Additional resources are available through Coursemate. We suggest that you quickly read over the appropriate chapter or pages listed for a particular topic, attend the lectures, then go back and re-read the chapter to get more of the fine details.

Suggested additional 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

Laboratory Manual: (Mandatory)

The Laboratory manual is mandatory and is on sale in MacDonald 004 or can be downloaded from the laboratory website (which you can access from BBLearn).

Course objectives:
At the end of this course, the student should be able to;

- Identify, use and define the relevant scientific terms describing cellular processes and structures.
- 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.

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Evaluations:

This course is worth 3 credits. You must obtain a mark equal or greater to 50% to pass the course. Evaluations will be marked as follows:

Course participation (Lecture Tools)	Up to 10% based on your level of participation *
Midterm exam 1	15% (Material from first 5 weeks – February 14th in the afternoon)
Midterm exam 2	15% (Material of second third – March 21st in the morning)
Laboratory portion	25%
Final exam (Cumulative)	35% All course material will be covered on this exam

** If you wish to opt out of using Lecture Tools, you must do so **by January 31st in writing** via email to Marc Charette [marc.charette@uottawa.ca]. If you choose to opt out, your final grade will be calculated with the final exam worth 45%. The class participation mark will be calculated as a proportion of your level of participation throughout the semester, whereby to obtain 10% in class participation, you must actively participate using Lecture Tools in at least 90% of the lectures. Participation does not equate to accurate answers but actively engaging in the activities carried out during lectures.*

Exams will be a combination of multiple choice questions, short answers, associations, identification, as well as long answer (comprehensive) questions.

> For those of you who have a legitimate reason for missing the midterm I will try and set up an alternative date for you to write the exam. In most cases this will be the Friday before the midterm. The reason that I can not guarantee an alternate date is that we often don't have a room available on the campus to use for the exam.
> **Missing a midterm exam must be justified. You must notify the professor and Marc Charette with a written justification. This may be submitted electronically as relevant. Only Marc Charette and the professor will determine if the absence is justified.** http://www.uottawa.ca/about/policies-andregulations/academic-regulations# **and** http://www.uottawa.ca/about/policies-andregulations/academic-regulations#
>
> PLEASE NOTE: the alternate exam is only for those who can't write on the exam date because of the reasons outlined above and those that do write on the alternate date must provide a written explanation from a coach or university representative for why you can't write on the Saturday. If you can't write on both the Saturday and the alternate date, but still have a valid reason for missing the midterm exam **the value of the exam can be added to the final (ie final will be worth 55% of final mark). In the case of an unjustified absence to the exam, you will receive a mark of 0 for this exam.**

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.

Students registered with Access Services should contact the course co-ordinator (Marc Charette) as early as possible in the term.

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 register for the exam.

Finally, 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 necessarily all encompassing of the discussions held in class. In addition, do not rely on podcasts as sometimes, technology does fail us….

Important deadlines for the Winter 2015 term

January 12 Classes begin
February 16-20 Study week
March 20 Last day for withdrawal from a course
April 14 Classes end (Tuesday April 14 – Friday schedule)
April 7-24 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 22 Last day for application to write a supplemental/deferred examination – check with Faculty
July 6-11 Exam period for deferred and supplemental examinations

Have a great semester!