

Department of Biology Course Outline

SC/BIOL 2021 3.0 Cell Biology Winter 2020

Course Description

A study of cell biology and aspects of related biochemistry. Topics include membranes, the endomembrane system, the cytoskeleton, cellular motility, the extracellular matrix, intercellular communication and intracellular regulation. Three lecture hours.

Prerequisites

Prerequisite: One of the following: (1) SC/BIOL 2020 4.00, (2) SC/BCHM 2020 4.00, (3) SC/BIOL 2020 3.00, (4) SC/BCHM 2020 3.00, (5) SC/BIOL 1010 6.00 and SC/CHEM 2050 4.00, (6) SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 and SC/CHEM 2050 4.00.

This course cannot be taken at the same time as BIOL2020.

Course Instructors and Contact Information

Section M: Course Instructor: Professor Paula Wilson
Email Contact: BIOL2021@yorku.ca
Office Hours: Will be posted on the Moodle course website

Section N: Course Instructor: Professor Michael Gadsden
Email Contact: BIOL2021@yorku.ca
Office Hours: Will be posted on the Moodle course website

**Please see policy on email etiquette below in course policy section before sending an email*

Schedule

Lectures

Section M: Tuesdays and Thursdays 10:00 - 11:30 LAS A
Section N: Tuesdays and Thursdays 17:30-19:00 VH C

Evaluation

Midterm Test 1*:	22%	multiple choice & written answer. no cheat sheet
Midterm Test 2*:	23%	multiple choice & written answer. no cheat sheet
Final exam:	40%	multiple choice & written answer. no cheat sheet
iClickers**	5%	
Assignments***	10%	

*There will be no make-up midterms. Students who miss the midterm will have the value of the missed midterm added to the final exam.

** Normally students will receive a point for each question they answer whether it is correct or not. Exceptions: students who do not seriously answer short answer questions (eg give unrelated responses or idk) will receive zero for that question; some in-class case studies may require correct responses to earn points. The iClicker grade will be calculated out of 80% of the total number of iclicker questions asked. Thus you can miss 20% of the questions and still receive full grades for iClickers. This is to account for an occasional missed class (e.g., due to illness or other reasons) or for a forgotten/malfunctioning electronic device, etc. Please note: iclicker questions are only for students in class during lecture.

***There will be several short assignments over the course. Most assignments will be completed online via Moodle. Some may also be completed during class time. Additional information will be provided in the first lecture.

Learning Outcomes

Upon successful completion of BIOL 2021, students will be able to demonstrate an understanding of

- the internal organization of the cell
- major cellular functions at the molecular level
- aspects of the interactions between cells in multicellular organisms.

Resources

Textbook

- Alberts *et al.* (2015) *Molecular Biology of the Cell*, 6th ed., Garland Publishing.
- This textbook is on reserve in the Steacie library under "BIOL 2021" and can be purchased or rented from the York Bookstore

iClicker Personal response system – via your own mobile device or computer

- This is a free application which is required to participate in in-class questions.
- Details regarding how to create an account will be posted on the Lecture Moodle course website.

Course Moodle Site: <http://moodle.yorku.ca>

Course Content

Chapters correspond to Alberts, 6th ed. (2015). Lectures may cover only selected topics from each chapter, so use the lecture material and the major topics document as your guide for what is important. Midterms and exams will be based on relevant material in lecture, the text, any additional readings assigned during the course, and online assignments.

Tentative Lecture Schedule (*May change depending on pace of lectures*)

Date	Lecture #	Topic	Chapter
Jan 7, 9	1, 2	Introduction, Visualizing Cells	9
Jan 14, 16	3, 4	Membrane Structure	10
Jan 21, 23, 28	5,6,7	Transport of Small Molecules	11
Jan 30, Feb 4, 6	8,9	Compartments, Protein Sorting	12
Sunday Feb 9	Midterm 1		
Feb 11, 13	10, 11	Intracellular Membrane Traffic	13
Feb 17-21		Reading Week	
Feb 25, 27	13, 14	Cell Signaling	15
Mar 3, 5	15, 16	Cell Signaling	15
Sunday Mar 8	Midterm 2		
Mar 10, 12	17, 18	Cytoskeleton	16
Mar 17, 19	19, 20	Cell Cycle	17
Mar 24	21	Cell Death	18
March 26	22	Junctions & Adhesion	19
Mar 31, April 2	23, 24	Cancer	20
TBA	All lectures	Final Exam	

Copyright Information

Copyright Note: All material associated with this course is the intellectual property of the instructor and/or protected under Canadian copyright law. All material, including lecture slides or personal recordings, activities, tests and assignments are to be used for personal study purposes only. Unauthorized distribution can lead to a violation under Copyright law.

Important Dates

Midterm Test 1*: Confirmed: Sunday Feb 9, 2020 11:00am 80 min
Midterm Test 2*: Confirmed: Sunday March 8, 2020 11:00 am 80 min
Final exam: Scheduled by Registrar's Office

Last Day to drop the course without receiving a grade: March 13, 2020

Last Day to withdraw from the course and receive "W" on transcript: April 5, 2020

NOTE: for additional information on withdrawing from a course refer to <http://secretariat-policies.info.yorku.ca/policies/withdrawn-from-course-w-policy-and-guidelines/>

NOTE: for additional important dates such as holidays, refer to the "Important Dates" section of the Registrar's Website at <http://registrar.yorku.ca/enrol/dates/>

**test dates will be confirmed in January*

Course Policies

E-mail Policies

We will try to respond to email within 48 hours, but it may not always be possible. You may also post questions on the Moodle Student Forum, as a classmate may know the answer.

Subject Line: Please place the subject of the message in the subject line.

Email Body: Please include your name and student number.

Please maintain formal structure with emails, beginning with "Dear ..." and ending with your name and student number.

Grading

- Grades will be posted in Moodle grade book as they become available.
- There are no "extra credit" assignments. Grades are not bell-curved.

Policy for a Missed Midterm Exam

There are **no** makeup midterms; if you miss a midterm (you're absent on that day), the weighting will automatically be transferred to the final exam, which is cumulative.

Policy for Missed Assignments

The deadline for each assignment is 5 days. However each assignment will remain open for at least two days after the deadline, providing everyone with an automatic extension if it's needed. Assignments not completed by the end of the extension period will receive a grade of zero.

Policy for a Missed Final Exam

- If you miss the final exam you must request deferred standing. Information, instructions and forms for requesting deferred standing are found at: <http://myacademicrecord.students.yorku.ca/deferred-standing>
- You must complete a Deferred Standing Agreement Form and provide supporting documentation (for illness this includes an Attending Physicians Statement <http://myacademicrecord.students.yorku.ca/pdf/attending-physicians-statement.pdf> and submit it to the undergraduate office, 102 LSB.
- In most cases students will be required to petition for deferred standing.

- The format of the deferred final exam may be essay, short answer, multiple choice, or a mix of these options.

University Policies

Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards. There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students' research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website at – <https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>

Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Additional information is available at the following websites:

Counselling & Disability Services - <http://cds.info.yorku.ca/>

Counselling & Disability Services at Glendon - <http://www.glendon.yorku.ca/counselling/>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

York University issued Accommodation Letters should be emailed to jclarkj@yorku.ca

Ethics Review Process

York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants*. In particular, students proposing to undertake research involving human participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an *Application for Ethical Approval of Research Involving Human Participants* at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at

<https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf>

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best

person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - <http://secretariat-policies.info.yorku.ca/policies/disruptive-and-or-harassing-behaviour-in-academic-situations-senate-policy/>