

Department of Biology Course Outline

SC/BIOL 2021 3.0 Cell Biology Winter 2022

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

Prerequisites: One of the following: (1) SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 and SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00 (2) SC/ISCI 1110 6.00 and SC/ISCI 1210 6.00 (3) SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00 and SC/ISCI 1201 3.00 and SC/ISCI 1202 3.00.

Course Instructors and Contact Information

Sections M,N: Course Instructor: Professor Paula Wilson
Email Contact: BIOL2021@yorku.ca for all messages related to the course

**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 ACW 206

Evaluation

*****Special Note: Should it become necessary to change the mode of delivery of the course temporarily or permanently, the date, type and/or weight of the planned assessments may change.*****

Quiz*	10%	multiple choice &/or written answer.
Midterm Exam**	25%	multiple choice & written answer.
Final Exam**	35%	multiple choice & written answer.
iClickers***	5%	
Assignments****	25%	

*A short quiz will be held on Sunday February 6 at 1pm to provide you with a practise run for completing a closed book exam.

**The midterm exam will be held in person on Sunday, March 6, 2022 at 1pm (time still needs to be confirmed based on room availability). The final exam will be held in person and scheduled by the Registrar's office.

*** Normally for iClicker questions, 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 write unrelated responses or "idk") will receive zero for that question and for that day; 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), for a forgotten/malfunctioning electronic device, etc.

Final grades will be calculated in two ways – as indicated above, and as indicated above excluding the clicker grade (in this case the grade will be calculated out of 95 rather than 100). The higher grade will be used as your final grade. This means that, should you have to miss several classes through no fault of your own (for example, COVID-related), you do not have to worry about the impact on your final grade, as the alternate calculation will omit the clicker grade.

****There will be regular assignments completed via Smart Biology and eClass. Together they will count for 25% of your final grade. Additional information will be provided on the course website.

Learning Outcomes

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

- Describe the general organization of the eukaryotic cell and relate it to cell evolution
- Relate major eukaryotic cell structures to their function
- Describe and apply some of the techniques and experimental approaches for studying cells
- Compare and contrast the molecular mechanisms of different forms of transport within the cell
- Explain, compare and apply concepts in cell motility, communication, interaction and regulation.

Resources

Textbook

- Alberts *et al.* (2015) *Molecular Biology of the Cell*, 6th ed., Garland Publishing.
- This textbook is on reserve in the Steacie library and can be purchased or rented from the York Bookstore. The bookstore has hard cover, unbound and eText options. If you want a paper copy, I recommend the unbound copy designed for a 3 ring binder, as it is cheaper than the hard cover option and more convenient to use and permits you to carry around a chapter at a time.

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.

Smart Biology

Technology Requirements

You **must have access to reliable high-speed internet connection (wi-fi) and a computer** in order to take this course. You must be prepared to complete the course as remote delivery as well as in person. Requirements include:

- Access to audio (including microphone), a web cam and Zoom software.
- Reliable access to eClass.

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	Topic	Ch
Jan 11, 13	Introduction, Visualizing Cells	9
Jan 18, 20	Membrane Structure	10
Jan 25, 27	Membrane Transport of Small Molecules	11
Feb 1, 3	Membrane Transport and Electrical Properties	
Sunday Feb 6	Quiz (online)	
Feb 8, 10	Compartments and Protein Sorting	12
Feb 15, 17	Compartments/Membrane Trafficking	13
Feb 22, 24	Reading Week no classes	
Mar 1, 3	Membrane Trafficking	13
Sunday Mar 6	Midterm Exam	
Mar 8, 10	Cell Signalling	15
Mar 15, 17	Cell Signalling/Cytoskeleton	16
Mar 22, 24	Cytoskeleton/Cell Cycle	17
March 29, 31	Cell Cycle/Cell Death	18
April 5, 7	Cell Adhesion	19
TBA	Final Exam	

Copyright Information

Copyright Note: All material associated with this course is the intellectual property of the instructor and/or publisher and is 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. No materials can be shared, distributed or sold to other parties, nor uploaded to internet sites. Unauthorized distribution can lead to a violation under Copyright law and to an academic honesty offense.

Important Dates

Quiz	Sunday Feb 6, 2022 1pm
Midterm Exam	Sunday March 6, 2022 1pm
Final exam:	Scheduled by Registrar's Office

Last Day to drop the course without receiving a grade: March 18, 2022

Last Day to withdraw from the course and receive "W" on transcript: April 10, 2022

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, 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 (the BIOL 2021 team) will try to respond to email within 48 hours, but it may not always be possible. Please do not send multiple messages for the same issue. When writing, please include the following information:

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

Email Body: Please use formal structure with emails, beginning with “Dear Professor...” and ending with your name and student number. Emails with no student name/number may not receive a response. We advise you to use your yorku email account to ensure that your message does not land in the junk folder and to ensure confidentiality.

Grading

- Grades will be posted when they are available.
- There are no “extra credit” assignments.

Policy for a Missed Midterm Exam

If you miss a midterm, the weighting will automatically be transferred to the final exam, which is cumulative. In special cases you may request an oral midterm exam.

Policy for Missed Assignments

Most assignments will have a specific deadline and a brief grace period which will be posted with the deadline. Assignments not completed by the end of the grace period will receive a grade of zero. Unfortunately we cannot provide make-up assignments (remember you already had a grace period which is like an extension), so always complete assignments well before the deadline in case of technical issues, illness, etc.

Smart Biology assignment quizzes can be completed as many times as you like. The grade for any given assignment will be the last grade achieved before the end of the associated grade period.

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 submit it to BIOL2021@yorku.ca.
- 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 - <http://www.yorku.ca/academicintegrity/>

Important - A note from the Faculty of Science Committee on Examinations and Academic Standards:

Numerous students in Faculty of Science courses have been charged with academic misconduct when materials they uploaded to third party repository sites (e.g., Course Hero, One Class, etc.) were taken and used by unknown students in later offerings of the course. The Faculty's Committee on Examinations and Academic Standards (CEAS) found in these cases that the burden of proof in a charge of aiding and abetting had been met.

Accordingly, to avoid this risk, students are urged not to upload their work to these sites. Whenever a student submits work obtained through a third-party site (e.g., Course Hero, One Class etc.), the submitting student will be charged with plagiarism and the uploading student will be charged with aiding and abetting.

Note also that exams, tests, and other assignments are the copyrighted works of the professor assigning them, whether copyright is overtly claimed or not (i.e., whether the © is used or not). Scanning these documents constitutes copying, which is a breach of Canadian Copyright law, and the breach is aggravated when scans are shared or uploaded to third party repository sites.

Penalties associated with charges of Academic Misconduct can include zero on the assignment, letter grade reduction, failure in the course, notation on the transcript, and/or suspension.

Cheating is not worth it, and ultimately hurts your learning.

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 Student Accessibility 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:

Student Accessibility Services - <https://accessibility.students.yorku.ca/> York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

Please email York-issued accommodation letters to biol2021@yorku.ca.

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 two 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 period, students must complete and submit an Examination Accommodation Form at least 3 weeks before the exam period begins. The form can be obtained from Student Client Services, Student Services Centre or online at <https://registrar.yorku.ca/pdf/exam-accommodation.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-andor-harassing-behaviour-in-academic-situations-senate-policy/>

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