

Department of Biology Course Outline

Fall 2024 SC/BCHM 2021 3.00 Cell Biology

Course Instructor: Charlotte de Araujo

How to address me: Prof. Charlotte

Personal Pronouns: (she/her/hers)

Email: cdearauj@yorku.ca

Note: If you have a question or would like to talk, you can visit me during student hours, or approach me before/after class. I will try to respond to emails within two working days (not including holidays/weekends), however this is not always possible, so please be patient.

Please remember to exercise proper etiquette in any correspondence:

- Always use your yorku.ca email address - email from other sources may be filtered out.
- Include the course code, section, and a brief indication of topic in the subject line.
- Include your full name and student number at the end of each email so that we can identify you.
- Please use full sentences and proper spelling and grammar for readability.
- Please do not use the eClass Messenger for contact. This system is not used for this course.
- Please note that course related issues will not be acknowledged/resolved over the phone.

It is the students' responsibility to check the eClass website frequently for course related information/updates from the Instructor (via yorku email address).

Use reputable sources for course information (e.g. eClass website). For more information, please see <http://www.yorku.ca/webclass/module4a.html>

What are 'Student Hours'?

Student hours are dedicated times through the week for the course instructor and possibly TAs to meet with YOU. Pop in to introduce yourself, ask questions about the course, or discuss content from the course.

Student Hours: Please review eClass for more information.

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.

Office Location: 102B Life Sciences Building (LSB)

Class Times: Please consult York University Timetable for room locations.

Study Spaces on Campus:

<https://currentstudents.yorku.ca/study-spaces>

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Land Acknowledgement

York University recognizes that many Indigenous Nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit, and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.

Welcome to this Course!

Course Calendar 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.

Learning Outcomes:

Upon successful completion of this course, students should be able to:

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

Course Content

This second-year course will focus on a wide range of topics within Cell Biology. In order to fully understand the material presented during lecture, a basic understanding of chemical principles and cellular molecular biology (e.g. BIOL1000) will be expected of enrolled students. Although most of the curriculum can be found in the course recommended text, certain topics, such as the practical application of several techniques, will not be found in the text. Therefore, in order to be as successful as possible, each student should study both the material presented in lectures and in the assigned textbook readings.

Chapters correspond to Alberts, 7th ed. Use the lecture material and the major topics document as your guide for what is important. Assessments will be based on lectures, lecture material, textbook content and additional readings/resources assigned during the course.

Lecture Topics

1. Introduction to Cell Biology
2. Visualizing Cells
3. Membrane Structure
4. Membrane Transport of Small Molecules
5. Membrane Transport and Electrical Properties
6. Compartments and Protein Sorting
7. Compartments/Membrane Trafficking
8. Membrane Trafficking
9. Cell Signalling
10. Cell Signalling
11. Cytoskeleton
12. Cell Cycle
13. Cell Death
14. Cell Adhesion

Learning Materials






Textbook: Alberts et al. Molecular Biology of the Cell, 7th ed., Garland Publishing.

This textbook is on reserve in the Steacie library under “BIOL2021” and can be purchased from the York Bookstore.

Other readings and resources may be assigned during the course and will be made available to you.

Website (eClass): <http://eclass.yorku.ca/>

Technology Checklist:

 <p>An internet-enabled computer to access eClass and materials</p>	 <p>Zoom software installed on computer</p>	 <p>Access to reliable internet</p>	 <p>Webcam</p>	 <p>Microphone</p>
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Note: If you don't have access to a computer, webcam, microphone, consider [borrowing a laptop from York U](#), [financial aid from York](#), and [single workspaces available for student use on campus at the library.](https://www.library.yorku.ca/web/ask-services/printing-and-computing/computing/public-computers-labs/)

Assessment in this Course

Research about learning strongly suggests that the most important factor in learning is doing the work of reading, writing, recalling, practicing, synthesizing, and analyzing. Learning happens best when

people actively engage material on a consistent basis, and that is why we have high standards in this course. We are confident that, with appropriate effort, you **all** can meet those standards.

When possible, we also try to reduce unintentional bias in grading by, for example, grading assignments one question at a time (grading all of question 1 before grading any of question 2), grading anonymously, and using rubrics. These also help improve consistency in marking.

Crowdmark/eClass guidelines will be outlined along with assessments. Please note, for assessments students are required to attend in-person at York University, students will not be granted permission to write an online test or exam.

Grades will be posted when available.

Grade Breakdown

COMPONENT	GRADE VALUE
INTRODUCTORY ACADEMIC QUIZ	1%
WELLNESS ACTIVITIES	3%
ONLINE ASSESSMENTS - QUIZZES	42%
'COMPOSE A MC QUESTION' ASSIGNMENTS	10%
FINAL EXAM (CUMULATIVE)	44%

Introductory Academic Quiz

This component will be available on eClass. If you do not complete this assessment, please note that your grade for this component will not be redistributed.

Wellness Activities

This course will have a focus on mental health and wellness. While the course will require work, I want you to remain healthy! The Wellness Learning Activities will engage you with the course material and provide opportunity for skill building, while also focusing on strategies for wellness. Please remember that your health and well-being are important. If you do not complete these activities, please note that your grade for this component will not be redistributed.

Online Assessments

When used properly, this component can help you stay on track, help you understand the material, and help you identify what you do not understand.

Quizzes

The quizzes will be offered through eClass. You will be given one attempt for each quiz. For consistency, no deadline extensions will be provided. If you do not complete this assessment, please note that your grade for this component will not be redistributed.

QUIZ #	DUE DATE
1	Sept 13, 2024
2	Sept 27, 2024
3	Oct 4, 2024
4	Oct 11, 2024
5	Nov 1, 2024
6	Nov 8, 2024
7	Nov 15, 2024
8	Nov 22, 2024
9	Dec 3, 2024

Policy for a Missed Quiz | Built-in Accommodation

Built into the assessment scheme, is accommodation for various unexpected situations (illness, technological difficulties, other life emergencies, etc.) with certain conditions, as described below: Only the best seven completed quizzes will count towards your grade, and you can miss any two quizzes for any reason, including illness and technical difficulties. You will earn a zero for every missed quiz beyond the allowed two, no exceptions.

No notification or documentation is required, therefore please do not contact the instructor. Emails regarding extension requests will not receive a response.

Assignment

Full assignment descriptions and marking rubrics will be posted on eClass.

“Compose a MC question” assignment: As you study you will compose your own unique multiple-choice (MC) questions that you believe could be used on these evaluations. For each assignment, you will compose four MC questions (with four-five answer options each) and submit them online. Following the deadline, you will be asked to assess five of your peers’ questions. To aid with the peer review process, no deadline extensions will be provided, regardless of the circumstances. By the end of the semester, you will have submitted a total of eight unique MC questions. The questions along with your feedback will be reviewed by the teaching team. Only valid MC questions will be accepted (please do not submit random text).

If you do not complete this assessment, please note that your grade for this component will not be redistributed.

ASSIGNMENT	GRADE VALUE	DUE
MC QUESTIONS – ASSESSMENT I	1	Oct 11, 2024
PEER EVALUATION	4	Oct 25, 2024
MC QUESTIONS - ASSESSMENT II	1	Nov 1, 2024
PEER EVALUATION	4	Nov 22, 2024

Final Exam

The in-person exam will be cumulative and will take place during the Final Exam period. The date and time of the exam will be announced by the Registrar's Office. It is the student's responsibility to check the Registrar's Office website for final exam schedule.

The final exam will not be open book, but students will be able to go back and forth in the exam and change their answers during the allotted time period. Students are not allowed to consult or communicate with other students during any assessment (e.g., final exam). Evidence that students have collaborated during final exams will be followed up as a breach of the academic honesty policy. In-person assessments must be completed at York University. You will not be able to re-write the final exam. More information about the exam will be provided towards the end of the semester.

Policy for a Missed Final Exam

- If you miss the final examination, you must petition for deferred standing with appropriate documentation. The decision to grant deferred standing will be made by the appropriate petitions committee and not the instructor. Instructors may not grant deferred standing via a Deferred Standing Agreement Form (DSA).
- The format of the deferred final exam for this course may be essay, short answer, multiple choice, or a mix of these options.
- The instructor will not reply to questions about course material in the 24 hours prior to the start of final exams/final deferred exams.

Regrading/Reappraisal Procedures

For all re-grading requests, please submit your request in writing. In this request you will be asked to include your (1) Your Full Name and Student Number, (2) A summary of the request (e.g., the total was miscounted), and (3) a copy of the assessment within 5 business days of the material being made available to you. If it is determined that you have provided sufficient academic grounds, the material will be regraded. We will strive to review all re-grading requests within 3-4 weeks. Please keep in mind that re-marking can result in your score being raised, confirmed, or lowered. Second round of re-marking will not be offered.

We appreciate that grades are important to you and all your classmates. To be fair and consistent with the entire class, individual grades are not negotiable. We cannot provide “extra credit” assignments or opportunities to re-write any assessments. Marks for assessments are not “rounded.” Final grades are not “rounded.” No marks can be transferred for any missed coursework.

*Academic grounds means you make an academic argument for why your answer is correct – statements such as “this grade does not reflect my knowledge” or “I really studied hard and I deserve a better grade” are not academic grounds.

General Grading Guidelines

- Grades will be posted when they are available.
- There are no “extra credit” assignments.
- Grades are not retained on eClass if you switch between sections. Please keep this in mind in case you elect to change sections.
- Please note that it is the responsibility of the student to review all information on eClass. Therefore, email or meeting requests for grade boosts or extra credit or rounding of grades will not receive a response.
- As grades are shared on eClass for all students, requests for individualized course breakdowns will not receive a response.
- Please note, missed work is not the responsibility of the course director if a student enrolls following the first day of classes. It is the students’ responsibility to review the course content and course policies and resources outlined on eClass.

Prerequisites

Students must have taken all prerequisites in order to remain in the course. Prerequisites are strictly enforced for all students.

Students who are enrolled in this course but have not successfully completed one or more prerequisites will be manually de-enrolled.

If you have not successfully completed a prerequisite course, you will be de-enrolled from this course even if you are taking the prerequisite at the same time that you are taking this course.

Copyright Information

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, personal recordings, activities, tests and assessments (see Course Policies below) are to be used for personal study purposes only. Unauthorized distribution can lead to a violation under Copyright law and to an academic honesty offense.

Policy for Recording Lectures

Photographs or video recordings of any portion of the lectures (including slides) are not permitted.

Images and material presented are subject to Canadian copyright law.

Audio recordings are permitted provided they are used only as a personal study aid. They may not be sold, passed on to others or posted online. Remember the lectures are the intellectual property of the professor and cannot be distributed without permission. Lectures can only be recorded from your seat. No recording devices are permitted at the front of the room, including front table(s), the lectern and computer area.

Lecture slides are posted on the website and are for personal use only. They may not be sold, passed on to others or posted online.

Community Guidelines

The following values are fundamental to academic integrity and are adapted from the International Center for Academic Integrity. In our course, we will seek to behave with these values in mind.

As students, we will...

Honesty	Honestly demonstrate our knowledge and abilities on assignments and exams Communicate openly without using deception, including citing appropriate sources
Responsibility	Complete assignments on time and in full preparation for class Show up to class on time, and be mentally/physically present Participate fully and contribute to team learning and activities
Respect	Speak openly with one another, while respecting diverse viewpoints and perspectives Provide sufficient space for others to voice their ideas
Fairness	Contribute fully and equally to collaborative work, so that we are not freeloading off others Not seek unfair advantage over fellow students in the course
Trust	Not engage in personal affairs while on class time Be open and transparent about what we are doing in class Not distribute course materials to others without authorization
Courage	Say or do something when we see actions that undermine any of the above values Accept a lower or failing grade or other consequences of upholding and protecting the above values

This class statement of values is adapted from Tricia Bertram Gallant, Ph.D.

University Policies

Important Dates

Last Day to drop the course without receiving a grade: Nov 8, 2024

Last Day to withdraw from the course and receive “W” on transcript: Dec 3, 2024

For other important administrative dates, please consult the Registrar’s website > “Important dates.”

Grading Scheme

In accordance with the York University Undergraduate Calendar Regulations, the letter grades assigned in undergraduate courses at York conform to the descriptions and grade ranges shown here: <https://calendars.students.yorku.ca/2022-2023/grades-and-grading-schemes>

Academic Honesty and Integrity

Academic misconduct undermines the values of honesty, trust, respect, fairness, and responsibility that we expect in this class. York University provides supports such as academic integrity workshops to ensure that all students understand the norms and standards of academic integrity that we expect you to uphold.

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. Please review and familiarize yourself with the policy.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve your research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website:

Examples of actions that do not adhere to York’s Academic Integrity Policy include:

- Plagiarism (passing off someone else’s work as your own)
- Accessing unauthorized sites for assignments or tests
- Unauthorized collaboration on assignment and exams
- Uploading work to third party repository sites (e.g., Course Hero, One Class, etc.)
- Scanning, sharing, uploading, or publishing exams, tests, or scholarly work

For more information on what academic integrity is and why it is important see:

<https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>. Information on the process of investigations into breaches of academic honesty:

<https://spark.library.yorku.ca/academic-integrity-breach-of-policy-on-academic-honesty/>

Important Note from the FSc Committee on Examinations & Academic Standards (CEAS):

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. Whenever a student submits work obtained through an external site (e.g., Course Hero, Chegg), the **submitting student will be charged with plagiarism** and the **uploading student will be charged with aiding and abetting**. To avoid this risk, students are urged not to upload their work to these sites.

Assistance for Students (Academic and Well-Being)

Academic Advising*: <https://www.yorku.ca/science/academic-advising/> * Departments also offer program-specific advising. Check with your Department's Undergraduate Office.

Centre for Human Rights, Equity, and Inclusion: <https://rights.info.yorku.ca>

Centre for Indigenous Students Services: <https://aboriginal.info.yorku.ca/>

Good2Talk 24-hour Ontario Student Helpline: 1-866-925-5454 /Text: GOOD2TALKON to 686868

Keep.meSAFE: <https://myssp.app/keepmesafe/ca/home>

Learning Commons (general academic learning supports including library research, time management, study skills, career planning, etc.): <https://learningcommons.yorku.ca/>

Peer Assisted Study Sessions (PASS): <https://www.yorku.ca/colleges/bethune/get-help/pass/>

Peer Tutoring: <https://www.yorku.ca/colleges/bethune/get-help/peer-tutoring/>

Sexual Violence Response and Support: <https://thecentre.yorku.ca>

Student Counselling, Health & Well-being: <https://counselling.students.yorku.ca/>

Support Services for International Students: <https://yorkinternational.yorku.ca/international-student-support/>

Writing Services: <https://www.yorku.ca/colleges/bethune/get-help/writing/>

York University Student Services: <https://family.yorku.ca/student-services/#SCD>

York University Student Well-being Resources: <https://www.yorku.ca/well-being/resources/students/>

Accessibility

York University is committed to principles of respect, inclusion, and equality of all persons with accessibility needs across campus. The University provides services for students with accessibility needs (including physical, medical, learning, and psychiatric needs) 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 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 accessibility 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/>

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. To arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete and submit an accommodation request form at least 3 weeks before the exam period begins. <https://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf>

Student and Instructor Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. 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/>.

Academic accommodation refers to educational practices, systems and support mechanisms designed to accommodate diversity and difference. The purpose of accommodation is to enable students to perform the essential requirements of their academic programs. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the University.

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<https://calendars.students.yorku.ca/2021-2022/policies-and-regulations>