

SC/BIOL 4150 M 3.0 - Remotely Winter 2021

Course Description: A detailed examination of molecular, cellular, and physiological processes associated with the action of peptide hormones, neurotransmitters, and growth factors. Emphasis is on cell receptors and signal transduction mechanisms from the membrane to the nucleus.

Times and locations: Monday, Wednesday, Friday 9:30 AM – 10:30 AM – Delivered Remotely. [Please note that this course depends on remote teaching and learning.](#) [There will be no in-person interactions or activities on campus.](#)

Prerequisites: SC/BIOL 2020 4.0; SC/BIOL 2021 4.0

Course instructor and Contact Information:

Dr. Nezeke Alli

Email: nezeka3@yorku.ca

Please write 4150 in subject line for all emails

Virtual Office Hours: Fridays 12:00 PM – 1:00 PM - Zoom

Technical requirements for taking the course: In addition to stable, higher-speed Internet connection, students will need a computer with webcam and microphone, and/or a smart device with these features. Quizzes and exams must be done via desktop or laptop computer. To determine Internet connection and speed, there are online tests, such as [Speedtest](#),

Useful links for computing information, resources, and help:

[Student Guide to Moodle](#)

[Zoom@YorkU Best Practices](#), [Zoom@YorkU User Reference Guide](#)

[Computing for Students Website](#)

[Student Guide to eLearning at York University](#)

Organization of the course: [The entire course, including the submission of assignments, participation/discussion, and test-taking, will take place on the course's eClass, unless otherwise indicated by course instructor.](#)

- Synchronous Zoom meeting during scheduled times determined by the Registers Office. Expected to meet at scheduled time however, all live sessions will be posted for students who cannot attend (allows students to participate asynchronously)
- Classes broken into two 20 min segments followed by Q and A period
- PPT slides and Primary literature papers will be posted prior to class
- Group work done in Zoom breakout rooms during class time (9 sessions, 30 min each, see course Calendar for dates)
- Quizzes – on eClass/Moodle during class time (See course Calendar for dates)

Expanded course description: Detailed analysis of cellular regulation by examining major signaling pathways that operate in cells and how these function in various cellular processes such as cell growth and division, cell movement, metabolism, development, reproduction, the nervous system, and immune function. Diseases will be discussed in relation to these cellular processes.

Unit 1 – Introduction to Cellular Regulation

Unit 2 – Destruction Complexes in Cellular Regulation

Unit 3 – NF- κ B and Immune Receptor Signaling

Unit 4 – Ca²⁺ Signaling

Unit 5 – Aging

Unit 6 – Diseases (TBD)

Course objectives/purpose and learning outcomes:

Statement of Purpose:

The purpose of this course is to assist students in developing a critical overview of the regulation of cellular components while examining specific pathways and related diseases.

Learning Outcomes:

- Understand the processes of cellular regulation, including cell signalling, signal transduction, and altering molecular targets
- Post-translational modifications related to changes in gene expression
- Link cellular regulation to advances in cell and molecular biology to give a better understanding of diseases
- Research Topic, enhance scientific communication skills (oral via discussion of topic with group and presentation to class, and written via individual paper)

Course approach and readings: PowerPoint presentations will be used to present material in Zoom meetings. There is no textbook. Primary literature and various online resources can be found from the sites below:

Pubmed (<https://www.ncbi.nlm.nih.gov/pubmed/>)

Bookshelf (<https://www.ncbi.nlm.nih.gov/books>)

Journals (Cell.com, Nature.com, Science.com)

Evaluation: Quizzes, Project (group presentation and individual paper), Final Exam

Quizzes (40%)

- Five, worth 8% each.
- To begin at 10:00 AM sharp, 15 questions, 30 minutes total allowed time.
- Quizzes will be a combination of multiple choice, true/false and short answer questions. Quizzes will sequential.

Project - Group presentation and Individual paper (30%)

- You will have the opportunity to select a group on Friday January 15 at 3:00 PM. There are 10 groups and a maximum of 10 students/group. There will be nine, 30-minute breakout room discussions (every Friday from January 22, 2021 to March 26, 2021) to work with your group (see course Calendar for dates).
- **You must collaborate to make a video with graphics, animation, or some other presentation. An individual paper will be due from each student on March 24 based on the Group project subject.**
- Presentations will be held the last week of class (see course Calendar for dates). You must attend these presentations (attendance will be taken).
- Each presentation will be 12 minutes and 3 minutes for questions. Order of presentations will be determined randomly, with 4 presentations on each day.
- Evaluation:
 - 50% of the mark will be based on the individual paper. You can collaborate with your group colleagues on the subject and content, but the writing must be your own. You will be submitting by Turnitin (see statement in Course Policies section)
 - 50% of the mark will be based on the group presentation, and will be graded for the quality, scientific depth, and creativeness of the presentation.

Final Exam (30%)

- A 2-hour exam, comprised of multiple choice, and short answer questions, in eClass/Moodle. The exam material can include anything covered in the course, including the group presentations. I reserve the right to use ProctorTrack (see statement in Course Policies section).

Course Policies:

Grading

Please see the link below for York University's grading system.

[Academic Information - Grades and Grading Schemes | 2012-2013 Undergraduate Calendar \(yorku.ca\)](#)

Missed Quizzes – If you have a valid reason (extenuating circumstance), please contact me ASAP (no later than 4 days after the missed quiz), otherwise you will receive a grade of zero.

Late Assignments (Individual Paper) – Penalty of 10% per day late, up to a maximum of 5 days, after which you will receive a grade of zero.

Academic Integrity Senate Policy on Academic Dishonesty

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage.

Please consult the websites below for more details:

<http://www.yorku.ca/academicintegrity/students.htm>

[Academic Honesty, Senate Policy on | Secretariat Policies \(yorku.ca\)](#)

<https://secretariat.info.yorku.ca/files/CourseInformationForStudentsAugust2012-.pdf>

- Senate Policy on Academic Honesty and the Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning, and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Academic honesty and integrity

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing SPARK's [Academic Integrity module](#) at the beginning of the course. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the [Senate Policy on Academic Honesty](#).

Turnitin

To promote academic integrity in this course, students will be normally required to submit their written assignments to Turnitin (via the course eClass/Moodle) for a review of textual similarity and the detection of possible plagiarism. In so doing, students will allow their material to be included as source documents in the Turnitin.com reference database, where they will be used only for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin service are described on the Turnitin.com website.

ProctorTrack

"This course requires the use of online proctoring for examinations. The instructor may use an online proctoring service to deliver the exam(s), which would be administered through the Learning Management System (e.g., Moodle, Canvas, etc.). Students are required to have access to minimum technology requirements to complete examinations. If an online proctoring service is used, students will need to become familiar with it at least five days before exam(s). For technology requirements, Frequently Asked Questions (FAQs) and details about the online proctoring service visit [\[https://registrar.yorku.ca/proctortrack-faq\]](https://registrar.yorku.ca/proctortrack-faq). Technology requirements are described within. Students are required to share any IT accommodation needs with the instructor as soon as they are able."

Other Policy Information

- [Student Rights & Responsibilities](#)
- [Academic Accommodation for Students with Disabilities](#)

Guidelines for posting recording of Live Zoom Meeting on Course eClass.

- [Guidelines for the Taking and Use of Photographs, Video and Audio Recordings by Employees | Information and Privacy Office \(yorku.ca\)](#)

Please note:

- The recordings are used for educational purposes only and as a means for enhancing accessibility.
- Students **do not** have permission to duplicate, copy and/or distribute the recordings outside of the class (these acts can violate not only copyright laws but also [FIPPA](#)).
- All recordings will be destroyed after the end of classes.