

MolBio3B03: Advanced Cell Biology

Instructor: Dr. Roopali Chaudhary

Email: chaudr8@mcmaster.ca

Office hours: Wednesday 3:00 – 5:00 pm (BSB 201 A/E)

Course Coordinator: Alison Cowie

Email: cowieal@mcmaster.ca

Teaching Assistants: Shawn Hercules, Luke Bayer, Jordan Donders.

Course Content

Cell Imaging

Cytoskeleton

Cell adhesion and the ECM Cell polarity and locomotion

Signalling pathways

Protein trafficking through the nuclear pore complex

Gene transcription and small RNAs

Molecular cell biology techniques

Course Objectives

To understand current concepts of cell biology with an emphasis on primary research. To help develop your analytical, critical-thinking and communication skills by researching a topic, evaluating the information, and then synthesizing and presenting your findings effectively in writing and orally.

Text: Molecular Cell Biology, 7th Ed. Lodish *et al.*

While resource material and lecture notes will be provided, you are unlikely to do well in this course if you do not attend the majority of lectures since some of the key concepts are difficult to understand.

Online Quizzes	10%
Tutorial presentation	10%
Tutorial quizzes	10%
Written critique	20%
Midterm	20%
Final Exam	30%

Online Quizzes: Each student is to complete the online quiz available on Avenue to Learn during the indicated weeks. Students will be given 30 minutes and 1 submission to complete the quiz. **Best 4 out of 5 quizzes** will be counted towards the final grade.

Tutorials: Groups will present and discuss research articles related to the course material and lectures. The experimental data and conclusions will be critically analyzed. This should give a feeling of “real world” research and writing scientific papers.

Research Article Critique Project: Each student is required to write a critical review report on **one primary research article** related to the course material.

Exams and Grading Scheme: The exams will include multiple-choice and written-answer questions.

Requests for Relief for Missed Academic Term Work

Students may report absences lasting up to 3 days by using the McMaster Student Absence Form (**MSAF**) on-line, self-reporting tool, in order to request relief for missed academic work. More information can be found at <http://www.mcmaster.ca/msaf/>

Students may use this tool to submit a maximum of ONE request for relief of missed academic work per term without supporting documentation. It cannot be used for course work worth 25% or more, for that you must have supporting documentation for your absence and apply for accommodation through the Associate Dean's office.

IMPORTANT: you must put Alison Cowie (cowieal@mcmaster.ca), NOT, as the contact and immediately after using the online tool, students MUST contact her regarding the nature of the relief. Failure to do so may negate the opportunity for relief.

ACADEMIC DISHONESTY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at www.mcmaster.ca/academicintegrity.

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to www.mcmaster.ca/academicintegrity.

ACADEMIC ACCOMMODATION

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University's Policy for [Academic Accommodation of Students with Disabilities](#).

At certain points in the course it may make good sense to modify the schedule outlined above. The instructor reserves the right to modify elements of the course and will notify students accordingly (in class and post any changes to the course website).