

Department of Biology Course Outline

SC/BIOL3140 4.0
Advanced Biochemistry and Molecular Genetics Laboratory
Fall, 2019

Course Description

Research techniques used in fundamental biochemistry and molecular biology, including recombinant DNA technology, are explained, illustrated and performed in lab. Purification of a restriction endonuclease; isolation and mapping of bacterial plasmids, bacteriophage and recombinant molecules; polymerase chain reaction (PCR); nucleic acid hybridization. Enrolment restricted. One lecture hour, six laboratory hours two days per week. One term. Four credits.

Prerequisites

Prerequisite or corequisite: SC/BIOL 3110 3.00 or SC/BCHM 3110 3.00. SC/BIOL 3130 3.00 or SC/BCHM 3130 3.00 strongly recommended as a prerequisite or corequisite.

Course Instructors and Contact Information

Prof. G. Sweeney. ext 66635

Schedule

Lectures: M 10.30 CB115

Labs:

T/R	14:30	180	FRQ 205
W/F	14:30	180	FRQ 205

Evaluation

%	Category
5	Lab 1
20	Lab 2
10	Lab 3
20	Lab 4
20	Lab 5
10	In class quiz
15	Special topics assignment

[100] Final grade

"Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles."

Important Dates

Continuous assessment throughout course. No final exam.

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

Resources

Lab manual, website.

Learning Outcomes

Upon successful completion of this course, students should be able to: understand and perform laboratory techniques which play a critical role in Advanced Biochemistry and Molecular Genetics research.

Course Content

Experiential Education and E-Learning

Course Policies

Late assignments or lab reports will be deducted 25% for up to 24 hours and a further 10% per day each subsequent day.

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/spark/academic_integrity/index.html

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.

Student's 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/personal-counselling/what-is-counselling/>

York Accessibility Hub - <http://accessibilityhub.info.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

http://www.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-and-or-harassing-behaviour-in-academic-situations-senate-policy/>