

Department of Biology Course Outline

SC/BIOL 3130 3.0, Section M – Molecular Biology II: Regulation of Gene Expression
Winter 2020

Course Description

Gene structure and function. Mechanisms of gene expression in prokaryotes and eukaryotes. Storage and retrieval of genetic information; transcription, translation and their control.

Prerequisites

SC/BIOL 3110 3.0 or SC/BCHM 3110 3.0

Course Instructors and Contact Information

Dr. Katalin Hudak
A304 Farquharson Bldg.
hudak@yorku.ca
Phone: 736-2100 x33470
OFFICE HOURS: Please e-mail hudak@yorku.ca to make an appointment.

Schedule

Tuesday and Thursday 8:30am – 10am LAS B

Evaluation

Two midterm tests, 25% each = 50% (Midterm I Feb 04; Midterm II Mar 10)
Final Cumulative Exam = 50%
Optional Writing Assignment = 10% (Due Mar 19; If completed, Final Cumulative Exam = 40%)

Important Dates

Drop Deadline for this course is March 13, 2020

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

TEXT: "Molecular Biology" by Robert Weaver (2012), Fifth edition, WCB/McGraw Hill.
***textbook on reserve in Steacie Library and for sale or rent at bookstore

Course Website: Moodle - Powerpoint slides will be posted on Moodle prior to lecture

Complete answers to midterm questions will also be posted on Moodle, following the midterms.

Learning Outcomes

LEARNING OBJECTIVES:

- Detailed knowledge of transcription and translation in pro- and eukaryotes
- Critical evaluation of primary literature and understanding of experimental methods
- Interpretation of data
- Writing logical and comprehensive paragraph-style answers in tests

Course Content

GENERAL TOPICS:

- Prokaryotes - Transcription, operons, DNA-protein interactions
- Eukaryotes - Transcription, factors and activators, pre-mRNA splicing, mRNA stability, translational control of gene expression

Course Policies

MISSED TESTS: Absence from a test must be accompanied by a completed Attending Physician's Statement clearly stating why the test was missed. The grade value of the test will be divided between the other test and the final exam. Missed final exams must be accompanied with a petition to write a deferred exam: "Academic Petition Form" (<http://science.yorku.ca/current-students/procedures/petitions/how-to-file-a-petition>) and other required documents.

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/>

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.html>

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. 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 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://secure.students.yorku.ca/pdf/religious-accommodation-agreement-final-examinations.pdf> (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/>