

**MOLECULAR BIOLOGY I: NUCLEIC ACID METABOLISM
SC/BIOL 3110, 2014 FALL**

- COURSE DIRECTOR: Dr. Peter Cheung
Life Sciences Building, Rm 331A
yorkubiol3110@gmail.com
416-736-2100 x 31322
- LECTURES: Tue and Thurs, 10:00 AM – 11:20 AM, CLH L
- LECTURE SLIDES: Lecture slides will be posted on Moodle **AFTER** class has been given.
- TEXTS: No specific text required.
- Optional:
Molecular Biology of the Gene, 7th Ed
(J.D. Watson and others)
- GENOMES, 2nd Edition (2002)
T.A. Brown
<http://www.ncbi.nlm.nih.gov/books/NBK21128/>
- GRADING: Two midterm tests: 25% of overall mark each
Final Exam: 50% of overall mark
- The final exam is cumulative but weighted. Each section will end up having equal representation over the 3 exams.
- IMPORTANT DATES: First midterm: Oct 2nd, 2014
Second midterm: Nov 4th, 2014
Final exam: TBD
- EXAM FORMAT: Exams will be in multiple-choice format.
Always read the questions carefully and choose the BEST answer.
- EMAIL CONTACT: Questions requiring short answers can be asked via email up to 24 hours before a midterm or final. Please only send email questions to: yorkubiol3110@gmail.com.
- EMAIL ETIQUETTE: When sending emails, please include your name – my email program doesn't know how to translate email addresses to your names

- OFFICE HOURS:** Office hours are between 2 – 4 PM Thursdays at my office (Rm 331A, LSB). Students should email in advance and call my office number to arrange entry onto the 3rd floor of LSB. Students are encouraged to contact me only at the regular office hours, or immediately before or after classes.
- CLASS FORUM:** I have set up a class discussion forum on Moodle. It is open to all students in class and is meant for you to post questions or requests to one other. As the course director, I will **NOT** participate in the forum discussions. Any lecture-related questions for me should be asked by email (see above) or in person before, during, or after class.
- EXPECTATIONS:** Student attendance in classes is **EXPECTED** and **ALL** in-class material (including verbal and extra information written on the blackboard) are testable material in the midterm and final exams.

GENERAL COURSE POLICIES:

1. If you miss an exam (midterm or final) with a legitimate documented reason, documentation must be submitted to me (Dr. Cheung) in order to avoid receiving a grade of zero on the exam. Only a "York Attending Physician's Statement Form" (can be downloaded as part of the Petitions Package) OR a similarly detailed doctor's note (i.e. not simply a form stating that the student visited a clinic) will be accepted for medical excuses.
2. In the event of one missed midterm with a valid documented reason, the weight of this midterm will be distributed evenly between the other midterm and the final exam. **No makeup exam will be available for midterms.** In the event of a missed final exam with a valid, documented reason (where both midterms have been written), a deferred final exam will be offered. In the event that a student misses more than one exam with valid documented reasons (two midterms, a midterm and a final, or all three exams), the student will be **required to petition** in order to take the deferred final exam.
3. In order to be fair and consistent to the entire class, individual grades are not negotiable. Contact me about marks **ONLY** if there is a clear error in your mark (calculation, clerical, etc.) as soon as possible at yorkubiol3110@gmail.com.
4. Students are allowed to record lectures using their own recording devices. However, taking pictures of lecture slides or exam questions will **NOT** be allowed.

TOPICS THAT WE WILL COVER:

1. DNA basics: history, chemical composition and physical properties of nucleic acids
2. RNA structures and functional RNAs
3. DNA synthesis and replication
4. Methods for studying DNA and molecular biology techniques
5. DNA topology and topoisomerases
6. Genome organization/packaging of prokaryotes and eukaryotes
7. Organization, dynamics and regulation of interphase genomes
8. Regulation of genome replication
9. Chromatin and histone modifications
10. Epigenetics and regulation of gene expression

TOPICS WILL BE COVERED IN THESE CHAPTERS AND OTHER SOURCES:

Molecular Biology of the Gene, 7th Ed: Chapters 2, 4, 5, 7, 8, 9

GENOMES 2: Chapters 1 – 11

UNIVERSITY POLICIES:

1. Students who do not write the final exam, but have completed both midterms must contact me for permission to write a deferred exam (i.e. sign the Deferred Standing Agreement form). It is Senate Policy that "Normal requests for deferred standing must be communicated within one week following a missed examination, or on the last day to submit course work". Please check out the Registrar's Office Deferred Standing FAQs (http://www.registrar.yorku.ca/services/ds_faq.htm) for more details. Students who have missed more than one exam will be required to petition to write a deferred final exam.
2. University policy, procedures and regulations on Academic Honesty/ Integrity, Access/Disability, Student Conduct, Religious Observance Accommodation, etc. are available on the Committee on Curriculum and Academic Standards (CCAS) website http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm. Students will be held accountable to all policies and regulations on academic standards listed at this site.