BIOC 454 - NUCLEIC ACIDS
TIMETABLE Fall 2022

Lecturers:
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Teaching Assistants:
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Location and Time: MCMED 1034 from 12:35PM - 1:25PM/ Days: Mondays, Wednesdays & Fridays
Prerequisites: BIOC 311 and BIOC 312

DATE DAY	LECTURE TITLE	LECTURE	LECTURER	TA
AUG. 31st W	Introduction: topics in nucleic acids	**1**	WP	SB/BK
Sep 02 F	Prebiotic evolution (optional lecture)	1.5	WP	SB/BK
SEP. 05 M	**Labour Day – No class**			
07 W	Genome Structure and Function 1	2	JD	SB
09 F	Genome Structure and Function 2	3	JD	SB
12 M	Genome Structure and Function 3	4	JD	SB
14 W	Genome Structure and Function 4	5	JD	SB
16 F	Genome Structure and Function 5	6	JD	SB
19 M	Genome Structure and Function 6	7	JD	SB
21 W	Genome Structure and Function 7	8	JD	SB
23 F	Oncogenes and tumor suppressors in cancer: lecture 1	9	IW	BK
26 M	Oncogenes and tumor suppressors in cancer: lecture 2	10	IW	BK
28 W	Oncogenes and tumor suppressors in cancer: lecture 3	11	IW	BK
30 F	CRISPR/Cas9 technology	12	WP	BK
OCT. 03 M	High-throughout functional genetic screens: lecture 1	13	SH	SB
05 W	High-throughout functional genetic screens: lecture 2	14	SH	SB
07 F	High-throughout functional genetic screens: lecture 3	15	SH	SB
10 M	**Thanksgiving – No Class**			
12 W	**Fall Break – NO class**			
14 F	Stem Cells 1	16	WP	SB
17 M	Stem Cells 2	17	WP	SB
19 W	DNA methylation and demethylation	18	WP	BK
21 F	DNA methylation during development	19	WP	BK
24 M	Methods in transcription	20	WP	BK
24 M	**Midterm Exam -Lectures 2-17 inclusive STBIO S1/4 6:30PM-9:30PM**			
26 W	Transcription factors	21	WP	BK
28 F	Heterochromatin	22	WP	BK
31 M	Drugging the cancer epigenome	23	WP	BK
NOV. 02 W	End replication	24	JT	BK
04 F	Telomeres and telomerase	25	JT	BK
07 M	Telomeres and disease	26	JT	BK
09 W	MicroRNA-mediated gene regulation	27	TD	BK
11 F	RNAi and chromatin	28	TD	BK
14 M	The PIWI proteins in stem cell biology	29	TD	BK
16 W	Cellular movement of RNAs	30	TD	BK
18 F	mRNA stability	31	TD	BK
21 M	mRNA decay	32	TD	BK
23 W	DNA damage responses: DNA repair mechanisms	33	AN	SB
25 F	DNA damage responses: checkpoint control and signaling	34	AN	SB
28 M	Genomic instability, point mutations and cancer: lecture 1	35	AN	SB
28 M	**Paper write-up due**			
30 W	Genomic instability, point mutations and cancer: lecture 2	36	AN	SB
DEC. 02 F	Model systems for the study of aging	37	AN	SB
05 M	Transgenerational epigenetic inheritance	38	WP	SB
	Classes end			

MARKING SYSTEM

- **Midterm examination (37.5%). Lectures 2-17 inclusive**
- **Paper write-up (25%). Drawn from Lectures 18-23.**
- **Final examination (37.5%). Lectures 24-38 inclusive**

Midterms and finals

Midterm and final exams will consist of a mixture of short answer and multiple-choice questions and will be conducted as three-hour, closed book, invigilated exams. Students unable to attend the midterm due to exceptional life events or medical reasons should notify Dr. Pastor as soon as possible to discuss the possibility of taking a rescheduled midterm.

TAs will conduct review sessions prior to the midterm and final.

*NOTE: Students unable to write the Final must contact the Exam Center and register for a deferred Final.

Paper writeup

For the paper write-up, students will choose one of several possible papers to write about. They will then write a written report answering the questions:

1) What science was known before that motivated this work?
2) What do you think was the most discovery in this work, and why?
3) What was your favourite experiment in the paper and how was it conducted?
4) How could scientists follow up on this research?

Students are allowed to discuss the paper write-up with each other or the TAs/professors, but must turn in separate written assignments, written in their own words.

Supplemental Examination

Students who have failed the class will be allowed to take a "supplemental" examination (worth 100% of final grade and based on lectures 1 to 38 incl.). The supplemental grade will be added to the student's transcript and will not replace the initial grade. Supplemental examinations will be given in the same format as scheduled midterm and final exams and will include short written answers and multiple-choice questions.

DISCLAIMERS

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information).

In accord with McGill University's Charter of Students' Rights, students have the right to submit in English or in French any written work that is to be graded (except in courses where knowledge of a language is one of the objectives of the course).

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.