



BIOB10H3 Cell Biology
Summer Term Syllabus, 2018
Dr. Rene Harrison

This course is designed to introduce theory and modern experimental techniques in cell biology. Emphasis will be on eukaryotic cells. Structure and function of major animal and plant organelles will be covered. Subsequent topics include the role of the cytoskeleton. Plasma membrane and extracellular matrix will also be detailed in the context of cellular interactions with the environment.

Prerequisites: BIOA01H & BIOA02H & CHMA10H & CHMA11H

Exclusions: BIO240H, BIO241H, (BIO250Y)

Instructor: Rene Harrison: biob10spring2018@gmail.com

Office hours: Wednesdays **1-2pm** or at Tutorials (see below)

Office location: SW541A

Lectures: AC 223. Thursdays: 10a.m.-noon and 2-4p.m.

Tutorials:** AC 223. Thursdays: 4-5p.m.

**Optional: Tutorials will be used as extended office hours only- no new material will be presented. Students must email Dr. Harrison questions/content to review. If there is no interest or need then the tutorial will be cancelled.

Blackboard Resources:

On campus portal

- outline of PowerPoint presentations will be uploaded onto the BIOB10 blackboard page
- will be available approx. 2 days before lecture
- will not contain all contents of lectures (only major points)
- students should print and bring outlines to class to take notes on additional details.

Textbook: “*Cell and Molecular Biology: Concepts and Experiments.*” 8th edition*. Gerald Karp.

Exams*: 2 Exams: Midterm worth 40%

-40 multiple choice questions + short answer questions- 2 hours

- **Saturday June 2, 9a.m.**

Final exam worth 60%

-75 multiple choice questions- 3 hours

* the Final exam is cumulative but emphasis on 2nd half

A short sample exam will be given 1 week prior to each exam. Answers to the sample exams will be provided in a separate file.

Please note there is **NO** web option for this course. Lecture attendance is essential for success in this course.

Course Email: biob10spring2018@gmail.com

Teaching Assistant: Urja Naik

Course email policy:

- Your email message must include in the Subject line the course identifier and a concise and clear statement of purpose [e.g., BIOB10Y: appointment outside of office hours]; the body should contain your full name; otherwise it is likely to be deleted, along with spam messages and messages potentially containing viruses. **Please only use your UTSC email address.**
- We will respond to legitimate email inquiries by email within 48 hours (in most instances) during the workweek (does NOT apply to weekends).
- Email should NOT be used as an alternative to office hours or as a mechanism to receive private tutorials.
- Specific questions regarding prerequisites/ administration should be addressed to the course coordinator: **Jennifer Campbell** (see below). jacampbell@utsc.utoronto.ca

Course Administration questions: Questions regarding course organization, exam planning, exam viewing and issues pertaining to special accommodation (AccessAbility, missed exams, illness, religious accommodation, legal issues etc.) are to be directed to the Course Coordinator, **Jennifer Campbell**). These issues are NOT dealt with by the Professor or TA.

Course Coordinator's [Jennifer Campbell](#)

Office hours: Monday & Wednesday (10a.m.-11a.m.) in SW421-D

Email: jacampbell@utsc.utoronto.ca

***Missed Exams**

There will be a single make-up for the midterm of SHORT ANSWER/ESSAY questions.

Students who will be unable to attend the midterm for religious reasons must notify the Course Coordinator as soon as possible after the date is announced. Students who are unable to attend the midterm due to illness must notify Jennifer Campbell (by email) within 3 working days of the test and arrange to present him with a completed UTSC medical certificate (available via the registrar's website) which confirms their illness, and medical attention, at the time of the exam. Medical certificates will be verified. The date of the make-up exam will be announced on blackboard and it is the **SOLE RESPONSIBILITY** of the affected student to ensure they know the date of the make-up exam. Students who miss a midterm with no acceptable, documented excuse will receive zero for that midterm.

****Students who miss the final must petition the Registrar to write a deferred exam.****

Accessibility Needs:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the *AccessAbility* Services Office as soon as possible. I will work with you and *AccessAbility* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC *AccessAbility* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Academic Integrity:

Please consult: <http://www.utoronto.ca/academicintegrity/resourcesforstudents.html>.

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

eg. On tests and exams: Using or possessing unauthorized aids. Looking at someone else's answers during an exam or test. Misrepresenting your identity.

**Please refer to this if you have any questions on what course material to study

STUDYING TIPS: What to study for exams:

Material that will be covered **ON** the exams:

1) Written Text:

- all text from handouts
- additional text shown in class (in blue)
- additional material mentioned in class that I say to write down
- assigned figure legends listed in syllabus (see the next page)

2) Figures:

- all assigned figures listed in syllabus
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What is **NOT ON** the exams:

1) Text:

- text from the textbook not covered in class/handouts

2) Figures:

- figures shown in class/handouts that were not assigned in the syllabus
- details in assigned figures that I stated in class you did not have to learn

BIOB10 Lecture Content & Assigned Figures

DATE	TOPIC	CHAPTER	RELEVANT FIGURES*
MAY 10	Course Introduction	---	---
	Prokaryotes & Eukaryotes	1	Fig. 1, 2, 8, 10, 17, 19 EP Fig. 1
	Biological Macromolecules/ Protein Functions & Sorting	2	Fig. 3, 4,5, 7, 10, 11, 17, 21, 22, 24, 46, 55, 56, Ch 3- Fig. 5
MAY 17	Studying Cells	18	Fig. 1, 6, 7, 11, 14, 15, 19, 20, 22, Ch.1- HP Fig. 2
	Cytoplasmic Membrane Systems: ER & Golgi/ Trafficking to Lysosomes & Plasma Membrane (Secretion)	8	Fig. 2, 3, 6, 9, 11, 12, 13, 14, 16, 20, 23, 24, 28, 29, 31, 33. Ch. 11- Fig. 2, Ch 4- Fig. 11, 19
MAY 24	Plasma Membrane: Structure & Transport	4	Fig. 4, 5, 12, 13, 24, 27, 28, 33, 44, 46, 51
	Endocytosis/ Phagocytosis	8	Fig. 37, 38, 43 46
MIDTERM EXAM	Date and Time TBA	---	----
MAY 31	Mitochondria	5	Fig. 1, 3, 4, 5 (aerobic only), 10, 21, 30, Ch 8- Fig. 47
	Chloroplasts	6	Fig. 2, 3, 4, 5, 16, 20, Ch. 8- Fig. 48
	Other Organelles	8, 12	Ch. 8- Fig. 10, 36, Ch. 12- Fig. 5, 6, 7, 9
JUNE 7	Studying Proteins	18	Fig. 26, 27, 28, 30, 31, 32, 33, Ch. 2- Fig.47, 48 Ch. 11- Fig. 34
	Cytosolic Proteins/Scientists	---	---
	Cytoskeleton: Microtubules	9	Fig. 1, 2, 3, 4, 5, 7, 10, 11a, 12, 13, 14c, 24, Table 1
JUNE 14	Cytoskeleton: Actin/ Intermediate Filaments	9	Fig. 34, 35, 36, 39b, 41, 43, 45, 49, 58, 59-63, 65
	Extracellular Matrix (ECM)	7	Fig. 1, 4, 5, 6, 13, 14, 16, 19, 24, 25, 26, 27, 29, 30, HP fig 1
	Cell Specializations	---	---
FINAL EXAM	Date and Time TBA		

***Disclaimer: The above schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.**