

BIOB10H

Cell Biology

Syllabus and Schedule, Summer 2017

Course Description: 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)

Lectures: Thursdays, 10am-noon and 2pm-4pm in AC 223.

Tutorials: Thursdays, 4-5pm in AC 223. *Tutorials will be held on the following dates **only**.*

May 18th – Review session I (Midterm exam preparation)

June 8th – Review session II (Final Exam preparation)

The Teaching & Course Administration Team

Instructor: Dr. Aarthi Ashok

Course Email: biob10@utsc.utoronto.ca (please only send emails from your UofT email account; typically expect responses within 48 hours, but NOT on weekends)

- The instructor will respond to specific, course related questions over email.
- Office hours: Tuesdays, 2-3pm in SW521D. Additional office hours around exam dates will be announced on blackboard.
- All questions about general course administration should be directed to the course coordinator (please see below).

TA: Kewei Xu

Course Email: biob10@utsc.utoronto.ca (please only send emails from your UofT email account; typically expect responses within 48 hours, but NOT on weekends)

- The TA will respond to specific, course related questions over email.
- Contact the TA for all questions regarding any content-related questions as well as the tutorials and assigned weekly readings (from textbook) in the course.
- All questions about general course administration should be directed to the course coordinator (please see below) and will not be answered by the TAs.

Course Coordinator: Jennifer Campbell

Email: jacampbell@utsc.utoronto.ca

All questions regarding course administration, course pre-requisites and exclusions, exam scheduling, conflicts & viewings, missed exams, marks verifications and any special accommodations pertaining to medical illness, AccessAbility, religious observances etc. will be addressed by the course coordinator. Please consider attending her office hours for detailed or complex questions. Office hours: Monday & Wednesday: 10am –noon and Tuesday & Thursday: 2pm-4pm in SW 421D.

Textbook: “Karp’s *Cell and Molecular Biology: Concepts and Experiments.*” 8th edition. Janet Iwasa and Wallace Marshall. Wiley, © 2016.

Course blackboard page: Go to <http://portal.utoronto.ca/> and login with your UTORid and password to access the BIOB10H course site. Please check this site often in order to remain up to date with course information, resources and announcements. This site will contain:

- lecture slide outlines & weekly assigned readings from text (**Note:** you will be required to take your own detailed notes in class)
- course syllabus and schedule and a discussion board
- important announcements, including dates and location of exams for the course or additional course resources

Your learning in this course: Effective student learning, engagement with the course material and retention of concepts are important goals for the teaching team of this course. The time in lectures and tutorials of this course is dedicated to your learning and development as a UTSC student and you are asked to take charge of your own learning. This includes participating fully in discussion-based activities in the class, doing the assigned course readings and engaging fully in the review tutorial sessions. The instructor and TA will support your learning in this course – it is your responsibility to attend office hours, ask questions and seek the help you need to learn.

In-class learning: In lecture, you will often be asked to discuss questions or scenarios (posed by the instructor on slides in the class) with peers. Hence, peer-based learning is an important part of your learning in this course. It is important to conduct yourself in a friendly and professional manner at all times. Please note that distracting or disruptive behaviours in the classroom disrespect those around you and do not align with the University’s Code of Student Conduct:

<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjul012002.pdf>

A subset of the lectures will require you to click in answers to questions posed in class using an *i-clicker* or write summaries or answers to questions posed during the class session. You can purchase an *i-clicker* from the UTSC Bookstore; *i-clickers* work in each course you take that uses this technology and can be retained from year to year, as needed. You are also encouraged to bring loose-leaf paper to the class in which you can write down short answers, summaries or notes. These classroom practices are intended to make your learning more active in the course and to allow you to frequently test your understanding. While web recorded lectures are available for this course, I consider in-class engagement as essential to your learning in this course.

Facilitated Study Groups(FSGs): Your learning in BIOB10H will be supported by FSGs. These weekly study sessions are open to everyone in the class. Attendance is voluntary; however, studies show that students who attend FSGs regularly tend to earn higher grades in the course. Please be sure to fill out the survey at the beginning of the term to help ensure the study groups are scheduled at a convenient time for you. If you have any questions, please ask your facilitator, Siddiq Mirza, or visit the FSG website at: <http://ctl.utsc.utoronto.ca/home/fsg>.

Course Schedule:

Week and Lecture #	Date	Topic
Week 1, Lec 1	May 4 th 2017	COURSE INTRODUCTION; PROKARYOTES & EUKARYOTES STUDYING CELLS
Week 1, Lec 2	May 4 th 2017	MACROMOLECULES IN CELLS PROTEIN STRUCTURE
Week 2, Lec 3	May 11 th 2017	ORGANELLES IN CELLS THE ER: SECRETORY & MEMBRANE PROTEIN SYNTHESIS
Week 2, Lec 4	May 11 th 2017	THE GOLGI: VESICULAR TRANSPORT & SECRETION PROTEIN SORTING & LYSOSOMES
Week 3, Lec 5	May 18 th 2017	PLASMA MEMBRANE: STRUCTURE PLASMA MEMBRANE: FUNCTION
Week 3, Lec 6	May 18 th 2017	ENDOCYTOSIS & PHAGOCYTOSIS STUDYING PROTEINS I
tutorial	May 18 th 2017	Review session I (Midterm exam preparation)
		Midterm Test (lectures 1-6) – Date, time, location & format TBD Likely Weeks 3 or 4 (registrar decides)
Week 4, Lects 7 & 8	May 25 th 2017	MITOCHONDRIA: STRUCTURE & FUNCTION CHLOROPLAST: STRUCTURE & FUNCTION
Week 5, Lec 9	June 1 st 2017	THE CYTOSKELETON MICROTUBULES & MOTORS
Week 5, Lec 10	June 1 st 2017	STUDYING PROTEINS II STUDYING PROTEINS II
Week 6, Lec 11	June 8 th 2017	ACTIN FILAMENTS AND MOTORS INTERMEDIATE FILAMENTS
Week 6, Lec 12	June 8 th 2017	EXTRACELLULAR MATRIX AND CELL-CELL INTERACTIONS CELL SPECIALIZATIONS AND TISSUES
tutorial	June 8 th 2017	Review session II (Final exam preparation)
		Final Exam between June 13 – 17th, 2017 (Date, time, location TBD)

Course Assessments:

1. Midterm test: 45%
 - This exam will test content covered in lectures 1-6 (inclusive).
 - The date, time, location and exact format of this exam will be announced on blackboard.
 - This exam will likely be composed of both multiple choice and short answer questions.
2. Final exam: 55%
 - This exam will test content covered in lectures 1-12 (inclusive), with emphasis on lecture 6-12.
 - The format, location and date of this exam are yet to be determined and will be announced on the blackboard course site. The exam will occur during the final exam period at UTSC in the period between June 13th – 17th, 2017.

Special Notes:

- If you miss the midterm exam due to a medical illness, you will need to provide the Course Coordinator (see Teaching and Course Administration Team above) with a UTSC medical certificate (<http://www.utoronto.ca/registrar/sites/utoronto.ca/registrar/files/resource-files/UTSCmedicalcertificate.pdf>) within 2 days of a missed exam.
- Note that if you miss the final exam due to a medical illness, you would need to submit a petition via the registrar's office and provide them with documentation. The course instructor/coordinator are not responsible for the scheduling of missed final exams.
- There is no makeup opportunity for missed classes or tutorials.
- A single makeup midterm exam may be offered to students who provide significant evidence of extenuating circumstances/illness. Note that the structure of the makeup midterm will differ significantly from the normal midterm for the course and will likely be an oral exam or a written essay style exam, as determined by the instructor. Please contact the course coordinator and check the course blackboard site for further information during the term.

Studying tips:

What should you study from for term tests and final exam?

- All text and figures from lecture materials provided for all lectures in the course as well as any mandatory tutorials
- Your notes, including any discussion examples and activities from class (yes, you will need to take your own notes in class!)
- Additional information provided by the instructor in class while explaining lecture slides (should be in your notes)
- Relevant textbook material from the assigned readings
- Supporting materials provided by the TAs in review sessions and the facilitator in FSGs

What is NOT ON the exams?

- Text, figures or details from the textbook that were not covered in class/lecture slides

Academic Integrity: Please consult:

http://www.utoronto.ca/academicintegrity/resourcesfor_students.html.

[From The Centre for Teaching and Learning, UTSC]: Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensure 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. Potential offences include, but are not limited to: On tests and exams: using or possessing unauthorized aids, looking at someone else's answers during an exam or test or misrepresenting your identity. In academic work: falsifying institutional documents or grades or falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes. All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. There are other offences covered under the Code, but these are the most common. *Please respect these rules and the values that they protect.*

Accessibility Needs: [From The Centre for Teaching and Learning, UTSC]:

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.