

**BIOB10H**  
**Cell Biology**  
**Syllabus and Schedule, Fall 2019**

**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, 3pm-5pm in AC 223.

**Tutorials:** Thursdays, 5-7pm in AC 223. *Tutorials will be held on the following dates **only**.*

Sep 12<sup>th</sup>, 2019 from 5pm-7pm in AC223 – Study strategies tutorial

Oct 10<sup>th</sup>, 2019 from 5pm-7pm in AC223 – Review session I (review material assessed on term test)

Dec 2019 (in study break) – Date and time TBD in AC 223 – Review session II (review material assessed on final exam)

Note: Additional mandatory tutorials linked to the Integrative Research Poster Project will also be scheduled during this time slot on different dates. Please consult the Quercus site for this project (Integrative Research Poster Project – Fall 2019).

**The Teaching & Course Administration Team**

**Instructor:** Dr. Aarthi Ashok

Course Email: [biob10@utsc.utoronto.ca](mailto: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: Mondays, 10-11am in SW521D. Additional office hours around exam dates will be announced on Quercus. Note that on occasion it may be necessary to reschedule or cancel weekly office hours. Please check the course site regularly for notifications.
- All questions about general course administration should be directed to the course coordinator (please see below) and will not be answered by the instructor.

**TAs:** Carina Carianopol, Roxanne Fournier and Bona Mu.

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

- The TAs will respond to specific, course related questions over email.
- Contact the TAs 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](mailto: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 – 11:30am and Tuesday & Thursday: 2pm-4pm in SW 421D.

**Textbook:** “Molecular Biology of the Cell.” 6<sup>th</sup> edition. Alberts et. al. W.W. Norton & Company (©Garland Science). Available as a loose leaf text in the UTSC Bookstore.

**Course Quercus page:** The main source of information for BIO is the Quercus course page. You can access this page by clicking the Quercus link under Quick Links on the UTSC homepage. Use your UTORid and password to log in when prompted. You will then be able to access the BIOB10 Quercus page. 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 class, doing the assigned course readings and engaging fully in the review tutorial sessions. The instructor and TAs 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>

The majority of lectures will require you to share your answers with the class or write summaries or answers to questions posed during the class session. 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. I consider in-class engagement to be 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, Anshu Kashyap (anshu.kashyap@mail.utoronto.ca), visit the FSG website (<http://ctl.uts.utoronto.ca/home/fsg>) or email the FSG Coordinator, Maggie Roberts at [maggie.roberts@utoronto.ca](mailto:maggie.roberts@utoronto.ca).

**Course Schedule:**

<b>Week or Lecture</b>	<b>Date</b>	<b>Topic</b>
	Sep 5 <sup>th</sup> 2019	COURSE INTRODUCTION; PROKARYOTES & EUKARYOTES STUDYING CELLS
	Sep 12 <sup>th</sup> 2019	MACROMOLECULES IN CELLS CELL CHEMISTRY
Tutorial 1	Sep 12 <sup>th</sup> 2019	Study Strategies tutorial
	Sep 19 <sup>th</sup> 2019	PROTEINS: STRUCTURE, FOLDING & REGULATION ORGANELLES IN CELLS
	Sep 26 <sup>th</sup> 2019	THE ER: SECRETORY & MEMBRANE PROTEIN SYNTHESIS THE ER: PROTEIN QUALITY CONTROL
	Oct 3 <sup>rd</sup> 2019	THE GOLGI: VESICULAR TRANSPORT & SECRETION PROTEIN SORTING & LYSOSOMES
	Oct 10 <sup>th</sup> 2018	ENDOCYTOSIS & PHAGOCYTOSIS STUDYING PROTEINS I
Tutorial 2	Oct 10 <sup>th</sup> 2019	Review tutorial I
		<b>Reading week – No class on Oct 17<sup>th</sup> 2019</b>
		<b>Term Test (Lecture 1-6 inclusive) – Date, time, location TBD (registrar will notify)</b>
	Oct 24 <sup>th</sup> 2019	PLASMA MEMBRANE: STRUCTURE & FUNCTION
	Oct 31 <sup>st</sup> 2019	MITOCHONDRIA & CHLOROPLASTS: STRUCTURE
	Nov 7 <sup>th</sup> 2019	MITOCHONDRIA & CHLOROPLASTS: ENERGY CONVERSION
0	Nov 14 <sup>th</sup> 2019	MICROTUBULES & MOTORS
1	Nov 21 <sup>st</sup> 2019	ACTIN FILAMENTS AND MOTORS INTERMEDIATE FILAMENTS
2	Nov 28 <sup>th</sup> 2019	THE EXTRACELLULAR MATRIX AND CELL-CELL INTERACTIONS STUDYING PROTEINS II
Tutorial 3	Dec 2019 (TBD)	Review tutorial II (note: this is during the study break period prior to the start of final exams)
		<b>Final exam (lectures 6-12 inclusive) – Date, time, location TBD (final exam period)</b>

### **Course Assessments:**

#### **1. Term test : 40%**

- 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 Quercus.
- This exam will likely be composed of both multiple choice and short answer questions.

#### **2. Integrative research poster project: 10%**

- The details of this project are posted as a separate document on the Quercus site that is dedicated to this mandatory assignment (Integrative Research Poster Project – Fall 2019). Please log in to that page and make sure you can access the information. The TA dedicated to this project can be contacted at: [bioposterhelp@utsc.utoronto.ca](mailto:bioposterhelp@utsc.utoronto.ca)

#### **3. Final exam: 50%**

- This exam will test content covered in lectures 1-12 (inclusive), with emphasis on lectures 6-12 (inclusive).
- The format, location and date of this exam are yet to be determined and will be announced on the Quercus course site. The exam will occur during the final exam period at UTSC in December 2019.

### **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.utsc.utoronto.ca/registrar/sites/utsc.utoronto.ca/registrar/files/resource-files/UTSCmedicalcertificate.pdf>) within 48 hours of a missed exam, if you wish to be considered for a potential make up 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 Quercus site for further information during the term.
- Please note that the self-declaration of student illness reports cannot be used for any missed assessments in this course (all course work and deadlines associated with the Integrative Research Poster Project are exempt from use of self-declaration forms).

### **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 should 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/resourcesforstudents.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 and could have serious consequences for students including suspension or expulsion from the university. 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 SW302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca).