Welcome to BIOS 222 - “Cell Biology”. This course is designed to provide a solid foundation in modern cell biology, along with the skills necessary for further independent learning.

Learning goals:
Understand that cells are the fundamental units of life, and life requires the exchange and processing of information at multiple levels of complexity.
Understand that fundamental structural units, as well as molecular and cellular processes, are conserved through evolution and yield the extraordinary diversity of biological systems seen today.
Use information about living systems at the cellular, subcellular and molecular levels to analyze and predict how cells react to their internal and external environment and interact with other cells.

Prerequisite: The prerequisite for this class is Bios 100. Therefore, we assume that all students will be familiar with introductory biology. This course will build on this knowledge.

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Please use your UIC email address when contacting the instructors and teaching assistants. Email from other addresses can be (and often is) filtered as spam by the UIC email system, and therefore there’s no guarantee that it will be received.

Course expectations during class time: Attendance is expected at all scheduled lectures. We will use in-class polling to assess your understanding during the length of the course. These exercises constitute 10% of your grade. They will take different forms but all are intended to increase your interaction with the material. They will be administered during the class time or handed out for you to work on them at home and upload by 9:00 AM the next morning (Wednesday or Friday). Evaluation of these exercises will build in three absences over the semester. Clickers will also be used in class (see I-clickers below). Lecture slides and other supplementary instruction material will be posted on Blackboard prior to each lecture. It is important that you regularly visit the Bios 222 Blackboard site to obtain the most up-to-date information and announcements.

Course expectations outside of class: Class exercises will require that in some instances you do a reading or search for information outside of class. You will also have to turn in assignments electronically outside of class hours. As a result, you should look at the blackboard site regularly (daily) throughout the semester. The course Blackboard site is set up to facilitate discussion and foster group activities. Use the discussion board to pose and answer questions amongst you; the instructors will monitor the conversation and chime in when appropriate. Directions for the written assignment will be distributed via Blackboard, and the written assignment must also be turned in via Blackboard.

Office hours: Questions that are likely to be shared by many class members should be asked in class, so everyone benefits from the answer. We mean it; questions and discussion during class are strongly encouraged. The instructors will be happy to answer specific questions for a few minutes after lectures. If this is not sufficient or impossible because of other commitments, students should arrange for an appointment with the instructor. Please send an email to request a one-on-one meeting. Teaching Assistants will hold office hours weekly (see specifics in Blackboard).

Exams will be based on material discussed in class. The dates for exams are fixed. Missing an exam will result in a score of zero for that exam. Make-up exams may be given if the exam was missed due to illness, mandatory religious obligations recognized by UIC, or official pre-excused university activities. An official medical certificate will be required in the event of an illness. If you miss an exam or expect to, you must contact the instructor as soon as possible. If you have a question about your score or think a grading mistake has been made, you must contact the instructor as soon as possible – ideally within a day or two after the grades are posted. Students need to bring a picture ID with them to each exam. Exams will not be allowed to leave the room at any time.

I-Clickers: I-clickers are required for this class, and their use in class will make up 1% of your final grade. I-clickers are available at the UIC Bookstore, or you can reuse your old ones. To register your i-clicker: (this needs to be done for this class even if you’ve registered your i-clicker before or for another class): 1) Go to the Blackboard site for Bios 222 2) Click on ‘Tools’ 3) Click on ‘Register your i-clicker remote ID’ 4) Follow the directions. You are not done until you receive the message telling you that your clicker is successfully registered!

Accommodations: University of Illinois at Chicago is committed to maintaining a barrier-free environment so that individuals with disabilities can fully access programs, courses, services, and activities at UIC. Students with disabilities who require accommodations for full access and participation in UIC Programs must be registered with the Disability Resource Center (DRC). Please contact DRC at (312) 413-2183 (voice) or (312) 413-0123 (TDD).

Your final grade for this class will be computed based on the following weights:

- Exam 1 – 20%
- Exam 2 – 20%
- Exam 3 – 20%
- Written Report – 9%
- Class exercises – 10%
- Exam 4 / Final Exam – 20%
- Clickers – 1%

Note that the actual points for each exam or assignment (written project and class exercises) do not matter. The only thing that matters is the percent of the total points scored, and the weighting toward the final grade. A class exercise, for example, could be 5 points or 1000 points, but it will still only count for a portion of 10% of your final grade. Throughout the semester, Blackboard will calculate and display the weighted percentage for all work completed to date. Thus, you will know exactly how well you are doing and how far away from the grade cutoffs you are. Blackboard will assign letter grades based on the weighted percentage. The grade displayed by Blackboard is the best indicator for how well you are doing in the class. At the end of the semester, these grades will be used to assign final grades. If at any time your grade is not what you’d be happy with as a final grade, you should immediately begin work to change it. Do not wait. Your grade in this class is up to you, please work on doing well throughout the semester.

The grading scale for this class is as follows:

- 85% and above = A
- 70-84.99999% = B
- 60-69.99999% = C
- 50-59.99999% = D
- <50% = F

This scale will NOT be changed and scores will NOT be rounded or otherwise adjusted at the end of the semester. 69.99999999% is still a C.

Extra credit: There is no way to get ‘extra credit’ in this class.

Academic misconduct/dishonesty: All students are expected to behave fairly and honestly. The vast majority of students don’t cheat. Cheating disrupts our ability to measure how well you understand the material and diminishes the efforts of honest, hard-working fellow students. Fairness and university ethics rules require that we take action when necessary. Therefore, students caught cheating will receive a failing grade, and the case will be transferred to the Dean’s office for possible further action.
September 2, 2016 is the last day to complete late registration; last day to add a course(s) or make section changes; last day to drop individual courses via Student Self-Service without receiving W (Withdrawn) grade on academic record. This is also the last day to submit Withdraw from Term request via Student Self-Service and receive 100% cancellation of tuition and fees (a $50 Administrative Fee is added if withdrawing from all courses during the first 10 days of the term). Students interested in these options should consult with an LAS College advisor.

October 28, 2016 is the last day for undergraduate students to use optional late drop in college office and receive a grade of W on the academic record.

Schedule:

Aug 23  Introduction to course, overview of living systems and cells
Aug 25  Cell classification and parts
Aug 30  Cell chemistry and chemical components
Sep  1  Protein structure and function
Sep  6  Membrane structure and function
Sep  8  How lipids, and proteins reach their destinations
Sep 13  How lipids, and proteins reach their destinations
Sep 15  How membranes traffic in and out of the cell: exocytosis and endocytosis
**Sep 20**  Exam 1
Sep 22  How cells respond to their environment: general and hormones  Assign Written Report
Sep 27  How cells respond to their environment: GPCR
Sep 29  How cells respond to their environment: enzyme-coupled receptors
Oct  4  How cells move: – actin cytoskeleton
Oct  6  How cells move – crawling
**Written Report DUE**
Oct 11  How cellular structures move: Cilia and flagella
Oct 13  How cellular structures move: Cilia and flagella
**Oct 18**  Exam 2
Oct 20  Cytokinesis, muscle contraction, organelle movement
Oct 25  How tissues form: Epithelium and Cell junctions
Oct 27  How tissues form: Epithelium and extracellular matrix
Nov  1  How tissues form: Connective tissue and extracellular matrix
Nov  3  How cell number and size is regulated
Nov  8  How cell number and size is regulated
Nov 10  How cell number and size is regulated
**Nov 15**  Exam 3
Nov 17  Tissue maintenance and renewal: stem cells
Nov 22  Tissue maintenance and renewal: stem cells
**Nov 24**  No lecture – Thanksgiving break
Nov 29  Techniques to study cell biology
Dec  1  Wrap up session
**Dec 5-9**  Date to be determined Final (Exam 4): LC E101