Biology 2020, Principles in Cell Biology (Fall 2019)

Lectures: Tu/Th from 10:45 to 12:05 in ASB220

Enforced prerequisites: Biol 1210 (or Biol 1610) and Chem 1210

Instructure: Markus Babst (babst@biology.utah.edu)
I will meet with students only after e-mail contact.
For questions regarding the course content please contact first the teaching assistant Katie Piscopo (u1208033@utah.edu).

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Goals / Topics: Principles of Cell Biology explores the relationship between cell structure and function and the experimental foundation underlying the science of cell biology, using examples from eukaryotes (plants, animals, and fungi). Students successfully completing Biology 2020 Principles of Cell Biology will understand:
- What are cells
- Evolution of cells
- Methods of studying cells
- Organelles and structure of the cell
- Chemical components of the cell
- Proteins: protein folding and structure
- Protein function: enzymes
- Metabolism
- Transmembrane proteins and membranes
- Protein function: channels and transporters
- The life of an enzyme: transcription, translation
- The life of an enzyme: function and regulation
- The life of an enzyme: loss of function and degradation
- The life of a transporter: translation and translocation at the ER
- The life of a transporter: folding at the ER and trafficking to the cell surface
- The life of a transporter: endocytosis and degradation
- Cell division: DNA replication, chromosome segregation, cytokinesis
- Cell signaling and sensing

Required text and assigned reading: Alberts et al., Essential Cell Biology, 5th edition; (ECB5; Garland Publishing). I do NOT recommend using earlier editions of ECB! Reading from this text will be assigned for each lecture.

Top Hat: Students will have to sign up for Top Hat (join code: 944550). Lectures and other information will be available through Top Hat.
Electronics: Students have to be able to access Top Hat during and after lectures.

Problem Sets: Every Thursday a Problem Set will be posted on Top Hat. This Problem Set has to be completed and handed in on paper to the TAs by the following Thursday (go to the Discussion Sessions!). Completion of the Problem Sets will count for 10% of the final grade. The answers to the problem sets have to be hand written and cannot be copied, printed or in electronic format. Students can work in groups and write the same answers (go to the Discussion Session!).

Problem solving / discussion sessions: Weekly discussion sessions will be conducted by the TAs (in JTB130, alternating between Monday 4-6pm and Wednesday 4-6pm; see schedule). Attendance at these sessions is optional but highly recommended. During these sessions the TAs will work with you on the Problem Sets.

TA Tutoring: One-on-one and/or small group tutoring by the TAs can be requested by sending an e-mail to Katie Piscopo (u1208033@utah.edu). Additional one-on-one tutoring for BIOL 2020 is available through the Biology Learning Center. We will identify students that have problems with the quizzes and therefore are in danger of failing. These students will be contacted and TA sessions will be organized.

Exams: There will be only one exam, the final exam, which will count for 25% of the final grade. The final exam is scheduled by the University and exam time and date cannot be changed. Each lecture will start with a short quiz (4min) about the previous lecture, and this quiz will be graded. The quizzes will be posted through Top Hat and only available for students that are present in class and will be time-limited to the first 4min of the class (don't be late!!). If you are not present or you answer the quiz wrong, you will lose points. 75% of the quiz points or more will give you a top grade on the quizzes which counts for 65% of the final grade. Points beyond the 75% will count towards your final grade. There are no make-up quizzes. You will have to complete Problem Sets (preferentially during the Problem solving / Discussion sessions) which will count for 10% of the final grade.

Missing a Lecture: You don't have to inform the instructor or the TAs if you miss a class. You can miss 25% of the quizzes and still finish with an A (assuming you finish all the problem sets and perform well in the final exam).

A.D.A.: The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for these accommodations.

University Safety Statement: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and
the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).