Course Syllabus

Principles of Biology BIOL 1210-001 Course Syllabus

Spring 2019 Mon/Wed 7:30a-9:25a JTB 310

BIO 1210_001 Sp 19 Schedule_new v2-1.xlsx

Course Description: Principles of Biology. Introduces the workings of life from the molecular to the ecosystem level. Topics include genetics, development, ecological interrelationships, evolution, physiology and behavior. A preparatory course intended for all life and health science students. (from University of Utah Course Catalog)

4 credits: Lecture and Discussion

Recommended Prerequisites: None, this is a general introductory biology course.

Instructor: Dr. Gary Rose rose@bioscience.utah.edu

Teaching Assistants:

- Yunus Ash: ashyunus@gmail.com
- Akanksha Trilokekar: u0842624@utah.edu
- Anish Singh u0912697@utah.edu

TA-directed discussion sessions: (To be Determined)

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Instructor Office Hours: by appt. South Biology Room 318.

Required Materials:
Textbook and associated software: Campbell Biology Concepts and Connections 3rd Custom ed for University of Utah by Reece, Taylor, Simon, Dickey, Hogan, packaged with Mastering Biology access code.

MasteringBiology registration will be necessary for accessing study materials. Custom text that includes the access code is available in the University bookstores

Pens for exams

Recommended items:

Notebook and colored pencils for in and out of class note taking.

Course Objectives: By the end of this course, our goal is that each of you will:

1. Demonstrate critical thinking skills and appreciate how our biological knowledge has been obtained through the scientific method.
2. Appreciate how biology is intertwined with other disciplines. (eg chemistry, math, physics) and be able to apply biological concepts towards real-life scenarios.
3. Be able to describe the inner workings of living organisms including:

- DNA replication, cell division, and transmission genetics
- gene regulation and protein synthesis
- cellular metabolism including respiration and photosynthesis
- movement of molecules and signaling mechanisms

4. Explain how biological processes are regulated by information flow, communication, cycles, and feedback loops.
5. Appreciate how evolution has shaped the ability of organisms to adapt and thrive, thus leading to the diversity of life.
6. Describe how complex organisms such as humans function at molecular, cellular tissue, organ, and systemic levels. Explain how function depends upon structure at all levels.
7. Describe the levels of life from viruses, bacteria, through the animal kingdom to humans and human's relationship with the environment.
8. Recognize how advances in biological technology, such as CRISPR genetic engineering, impact our world in positive ways as well as created controversies and ethical dilemmas. Be a more informed and responsible citizen.
9. Have enjoyed lively and respectful interactions with classmates as you learn together.
10. Be better prepared for further college coursework and your career and life ambitions.

See also Expected Learning Outcomes for Biology degrees
http://learningoutcomes.utah.edu/department-program/59

Course Structure: This class will use a variety of teaching and learning strategies. This is your class, and I aim to provide opportunities for you to challenge yourself and to contribute to the entire class learning experience. In-class activities will involve lecture, discussions, demonstrations, group activities, and exams that are designed to help you learn and apply the biological concepts, as well as to foster desire and skills for life-long, meaningful learning. Active participation of every student is expected in the class, and mutual respect will guide all interactions amongst students, teaching assistants and instructor. We will take a 5 min break ~halfway through the class session.

The University of Utah recommends 2-3 hours of study outside of class for each credit hour. This will be 8-12 hours per week for this class. Before each class period, each student is expected to read the relevant pages in the text, study all figures and diagrams. Before the next class, review your notes, correlate with the chapter learning objects, complete your, and re-read, or at least consult, the text to solidify your understanding. Make note of specific questions that arise.

Please feel free to ask questions or provide input at any time during class session, yet do realize that significant divergences from our topic at hand may be deferred to out-of-class dialogue. Questions may also be e-mailed to the Teaching Assistants.

Our **Teaching Assistants** will lead weekly discussion sessions as well as exam review sessions, time and location TBD. Although optional, active participation is highly recommended.

Class website on Canvas: This syllabus, powerpoint lectures, learning objectives, assignments, announcements, additional learning tools, your grades, and other information will be posted on our class website. https://utah.edu/students/. Click "My Classes" on the left side, log-in, and then click on BIOL 1210. If needed, assistance may be found on the Canvas Support page or you may call (801)581-6112. Please check announcements regularly.

Textbook resources: Our textbook includes access to a suite of study tools to supplement in-class learning. The system also includes an electronic version of the full Campbell's Concepts and Connections and numerous other learning resources.

Assignments and Evaluation (slight modification throughout the semester is possible):

Three mid-term exams will be worth 100 points each. The exams are based heavily on **Learning Objectives (LOs)** that are posted for each chapter. You are encouraged to fill in the LOs as we go along, as you likely will discover this is a valuable study tool for the exams and will help you retain the information for the future. Some LOs may be altered due to time constraints and/or student interest. The mid-terms exams will be held during regular class session. They will be non-cumulative, yet be aware that class material continues to build upon previous topics. Make-up exams will only be given if a note from a medical professional is provided, documenting that illness prevented the student from taking the exam.

Exam rules include:

- Students remain in the class during the exam unless given permission by the instructor or TA.
- Cell phones will be turned off and out of sight. Use of a cell phone, calculator, or other device during an exam will result in a 0.
- No talking or interacting with other students.

Mid-term exam dates: Wed **Feb 13** Wed **March 20** Mon **April 22** 7:30a-9:25a

Final Exam: There will be no comprehensive final exam.

Exam re-grades: If you believe one or more of your answers were incorrectly graded, you may submit your exam for re-grade within 7 days of exam return. It must not be altered in any way and be accompanied with a re-grade form that will be provided. Note that the entire exam will be re-graded, which may result in a higher or lower score.

Practice Worksheets will provide additional opportunity to discuss and master the course Learning Objectives as well as to advance problem-solving and critical thinking skills. A limited amount of class time will be devoted to addressing topics and problems in the worksheets, and they will be a major focus of TA-led discussion sections.

Reading Assignments: Reading of the text outside of class is expected and will certainly reflect upon your exam scores, and more importantly, contribute to your understanding of Biology. We will not cover all topics in-depth, so follow posted Learning Objectives to know where to focus your active reading. Learning Objectives will correlate with subtopics in the text chapters. We

will cover portions of a few chapters that are not included in the hardcover custom text. Also, there will be textbooks on reserve at the Marriott Library.

Other learning tools:

Guided Reading Worksheets are optional and will be provided for each chapter we cover to promote active reading. An answer key will be posted separately for you to check your answers. This will not be worth class points, yet some of the questions, or variants, may appear on exams.

Links and Animations for each chapter include additional and fun learning resources, such as relevant, concise utube videos. Feel free to send ideas to me or the TAs to add to this section.

Evaluation Criteria: Here is how grading will break down on a point system converted to % for final grade: **Total points possible and relative distribution may change slightly through the semester**, yet % needed for given grade will remain consistent.

Final grade for the course will be calculated based on the percentage (%)of total possible points earned throughout the semester. Grades will be assigned using the following matrix. Note that %'s are NOT rounded up to the next grade level. eg. 89.9% = B+ Adjustments may be made if overall class scores are low, yet you are guaranteed the grade based on the below scale.

Grade	***A***	***A-***	***B+***	***B***	***B-***	***C+***	***C***	***C-***	***D***	***E***
Cumulative pts % of total pts is = or >	***95***	***90***	***86***	***83***	***80***	***77***	***72***	***70***	***60***	***<60***

If you detect grading errors on any assignment or exam, contact the TA or me outside of class session within 7 days after you receive the grade. Please describe your concerns about specific questions in writing and return to me with the original graded page.

An incomplete grade for the semester will only be given in the event of an unfortunate event that may occur near the end of the semester, and only if you are passing with a C at the time of the crisis and have completed 80% of the course. The terms of completing the grade will be a contract between instructor and student. You can read about the policy here: http://www.sa.utah.edu/regist/handbook/incomplete.htm

Attendance: The first day of class is Monday **January 7**, and the last is **Monday April 22**. The University expects regular attendance at all class meetings. If an absence is unavoidable, it is your own responsibility to check with classmates or Canvas for notes and any assignments or announcements that you may have missed. Please do note e-mail me directly inquiring as to what was covered or announced during class. Missed exams and late assignments resulting from absence will directly affect your total score, and furthermore, lack of participation degrades your learning experience.

Other important dates:

Friday **Jan 18**: **Last day to add or drop the class**. Friday **March 8: Last day to drop the class with a withdrawal** on your transcript. If you fail to withdraw by March 2, a letter grade will be assigned based on cumulated points.

No class: Mon **Jan 21**, Mon **Feb 18**; Spring Break **March 10-17.**

Tutoring: Tutoring is available to the off campus Continuing Education classes through an eTutoring program. Go to www.etutoring.org and you can enter an Adobe Connect room to chat with a tutor in real-time and/or submit eQuestions.

On-campus personal tutoring is available through the ASUU tutoring center. http://www.sa.utah.edu/tutoring

Student Conduct: Mutual respect is a priority rule in this classroom. Any activity that affects other students will not be tolerated. Private discussions while the instructor or another student 'has the floor' are disrespectful and hinder the learning experience for the entire class.

Cell Phones: Cell phones must be in silent mode upon entering the lab. Please leave the room to talk even if class has not yet begun, as students may arrive early to study prior to lecture, and likewise during mid-class break. No text messaging allowed during class. Infractions of these rules may result in point deductions.

Personal Computers are encouraged for the purpose of taking notes, however, no e-mail or internet use during class unless it is a component of the class assignment.

Integrity: Any student found cheating on an assignment or exam will receive a failing grade for the course and if warranted, the matter will be turned over to the appropriate student disciplinary committee. Using another student's polling device is considered cheating.

For a detailed description of the university policy on cheating, please see the University of Utah Student Code: http://regulations.utah.edu/academics/6-400.php

Code of Student's Rights and Responsibility. Please be familiar with the Regulations described here: http://www.regulations.utah.edu/academics/6-400.html

University of Utah drop and withdrawal dates are on the class schedule. Also see http://registrar.utah.edu/academic-calendars/index.php

University of Utah Policies and Resources:

English language learners: several resources on campus that will support you with your language and writing development. These resources include: the Writing Center http://writingcenter.utah.edu/ the Writing Programhttp://writing-program.utah.edu/ the English Language Institute http://continue.utah.edu/eli/ Please let me know if there is any additional support you would like to discuss for this class.

Disability Accommodations: As per The Americans with Disabilities Act, 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 Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written

information in this course can be made available in an alternative format with prior notification to the Center for Disability Services http://disability.utah.edu/ 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 the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 801-581-5020. CDS will work with you and the instructor to make arrangements for accommodations.

Discrimination and Harassment policies: There will be zero tolerance for any Discriminatory or Harassing behavior or Sexual Misconduct. Please see Student Bill of Rights, section E http://regulations.utah.edu/academics/6-400.php

Sexual Misconduct Policies: 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. 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).

Wellness: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness; www.wellness.utah.edu 801-581-7776.

For information on the LGBT Resource Center, see: http://lgbt.utah.edu/lgbtrc-programs/safe-zone.php

If you are a student veteran, the Veterans Support Center in Room 1651 in the Olpin Union Building is available. See http://veteranscenter.utah.edu/ for more information and let me know if you need additional support.

Detailed schedule of lecture topics, exams and other events will be available on our Canvas site.

Course Summary: For a summary of the dates of specific lectures, exams and other information, refer to the Excel file BIO 1210_001 Sp 19 Schedule_new-1.xlsx