

**Syllabus**  
**Principles of Biology BIOL 1210-071**  
**Spring 2019**  
TuTh 3:30-5:30 pm; Sandy 201

**Course Description:** 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. No prerequisite required.

**Instructor:** Dr. Amanda Hoepfner

Email: [amanda.hoepfner@utah.edu](mailto:amanda.hoepfner@utah.edu) please do not email me via canvas

Office Hours: by appointment only, available via email

**Required Materials:**

1. **Textbook:** *Biological Science*, 4<sup>th</sup>, 5<sup>th</sup>, or 6<sup>th</sup> Edition, by Freeman, available at the University Bookstore. Copies of the text will also be available at the Marriot library and front desk of the Sandy Campus. The textbook is not required but highly suggested.
2. **MasteringBiology** is required. MasteringBiology access code does come with the book purchased through the bookstore, OR you can just buy access online. You must register through the Canvas course website under the Mastering tab.
3. **Turning Point Cloud Account and Clicker or ResponseWare license.** Please contact the U Bookstore of Teaching and Learning Technologies (801)581-6112 with any questions about clickers. Bring your polling device to class every day. Clickers must be registered by Friday, January 11<sup>th</sup>.

**Course Objectives:**

1. Develop and practice good academic habits: regular attendance to class, taking notes, and good study habits.
2. Develop and demonstrate critical thinking skills for biological processes.
3. Demonstrate an understanding of the scientific process.
4. Develop an understanding for biological processes and principles:
  - a. Evolution and natural selection.
  - b. Diversity of life
  - c. Cell form and function
  - d. Molecular biology
  - e. Genetics
  - f. Ecology
5. Be prepared to take core biology courses and be familiar with biological terminology.

## Course Structure:

- **Course Website:** I will post lecture slides, homework assignments, and announcements on Canvas. Go to <http://www.utah.edu/students/>, click on “My Classes” on the right-hand side, log in, and then click on Biol 1210.
- **Clicker questions/participation:** You must purchase a Turning Point Cloud Account and a Clicker and/or a ResponseWare license for in-class participation. **To register, you must follow the link on canvas and register with you U of U email address (umail).** Clickers allow you to respond to questions posed during class. This polling allows me to see if students are comprehending the materials and to take attendance. During every class, questions will be given throughout the lecture. At the end of the semester, if you have answered ~90% of the questions you will be given the full 100 attendance points towards your final grade. This allows students the ability to miss about 1 week of class during the semester without any negative impact on their grade. If students answer ~75% of the clicker questions they will be given 75 points, if they answer ~50% they will be given 50 points, and if they answer <50% they will be given no participation points. Do not send your clicker with a friend if you are going to be absent! This is considered cheating and you will both receive a zero for participation in the course! It is also cheating to share the session ID, given at the beginning of class, and students who do will also receive a zero for participation in the course! **Clickers must be registered through Canvas by Friday, January 11<sup>th</sup>.**
- **MasteringBiology assignments:** Every Monday, the Mastering assignment on material from the previous week will be due through the Mastering website, connected to the Canvas course page. The 100 class points that are used toward your final grade are calculated as your total mastering points earned divided by the total mastering points available (minus 100). This allows everyone to miss 100 mastering points out of the approximately 800 available and still get full credit. You have two attempts to answer every mastering question. There are no grade deductions for an incorrect answer in your two-attempt limit or for using a hint. If you want to practice, reworking assignments after submission is allowed without change in original credit. **There is NO credit given for late submissions. No extensions. No exceptions.**
- **Case Studies:** Case study homework assignments will be available on the Canvas class website. Each assignment will have a grading rubric included. Assignments must be turned in by midnight on the due date. Late assignments will lose 10% for each day it is late. Assignments will not be accepted after 10 days past the due date. Assignments must be uploaded directly to Canvas, emailed or hard copies turned in will NOT be accepted. Please TYPE your assignment, no handwritten assignments will be accepted. To upload an assignment to Canvas, click on Assignments on the left-hand side, then click on the underlined title of the assignment (example: Homework 1), On the far right, click on the +Submit Assignment. CHECK that you uploaded the correct file. The preferred file format is **pdf**, but doc, and rtf will also work; docX, jpeg, odt, wps, pages, etc, formats are NOT accepted. Canvas will compare your work against published literature and previous/current work by students to look for plagiarism. Therefore, avoid quoting materials, even if cited, everything must be explained in your own words.

- **Exams:** There will be 4 exams and 1 comprehensive final given throughout the semester, each worth 75 points. If the score of the final exam is higher than one of the previous exams, the lowest exam score will be replaced by the final score. The final score cannot replace a 0! In other words, **you must take every exam and the final score cannot replace a missed exam.**
  - Students will only be tested on materials covered in class. Exams may consist of multiple choice, short answers, matching, diagrams, and essays. Students may not leave the room during the exam or use their phones. Using a phone during an exam, or any other forms of cheating, will result in a 0 grade for that exam.
  - **Exam dates are firm, NO makeup exams will be allowed unless given written (email) notice of 2 weeks prior to the exam.** IF you have an unplanned medical or legal emergency and are unable to make it to an exam you need to contact me immediately (or have someone do it for you). You cannot wait hours or days before you talk to me. You must email me that it was physically impossible for you to be at the exam BEFORE the end of the exam time. You will also need official documentation saying that it was physically impossible for you to be at the exam. You were too sick and have a note from your doctor to verify, in a car wreck on the way and have a police report, were arrested and have documentation, etc. Unavoidable and documented issues can be made up.... not you slept in, had a cold, had a doctor's appointment, weren't ready to take the exam, etc.
  - **Re-grading Requests:** Students may request the reconsideration of a grade on an exam within one week of the day that the exam was returned. The re-grade will only be considered if accompanied by a written description of the perceived error in grading and why the answer provided by the student is appropriate. Please hand in your exam with your regrade request. Detail and organization in the request is critical. **Re-grade requests will not be considered after the one-week policy.** If a student is not present to receive their returned work, it does not exempt them from the one-week policy. It is the responsibility of the student to obtain returned work outside of class if they were not in attendance during the class period where a graded assignment or exam was initially returned to students.
- Please review and check all of your assignments and exam scores to ensure they were tallied correctly. Further, check that they were entered correctly into Canvas. You have **one week** after the exams or assignments are handed back to contact me about mistakes in adding or entering scores. Please note, for these issues you do not have to write a response, you only need to show me the mistake after class.
- **Grade Breakdown:** The final grade breakdown is as follows: Cumulative scores of 90%, 80%, 70%, or 60% will guarantee grades of not less than A-, B-, C-, D- respectively. There are 625 points total in this course:
  - Exams: 375 points, 4 exams and 1 final at 75 points each, 60% of final grade
  - Case Studies: 50 points, 2 assignments at 25 points each, 8% of final grade
  - MasteringBiology homework: 100 points, will earn the points as the percentage that you receive through MasteringBiology, your points = (Total # of points you earned) / (Total # of points available – 100 points), 16% of final grade

- In class participation (clickers): 100 points, see the breakdown of how points are awarded in the section above titled: Clicker questions/participation
- **No extra credit** will be offered for this course, all of the points available for this course are listed above. **No exceptions.**

### **How to study:**

Biology is not suited to rote memorization. "Facts" are meaningless without the context of the procedures and patterns of thought that characterize this science. Thinking scientifically takes practice, and active reading, listening, and problem solving are good practice. Many students learn best in interactive contexts, so please create informal study groups outside of class. You will learn, understand and retain much more if you have good study habits starting NOW. The University recommends 2-3 hours of study outside of class for each credit hour. That means **8-12 hours per week for this class**. Keep your notes and handouts in order. Learning biological terms is like learning a new language; keep a vocabulary list and look up definitions promptly. Write questions and look for 'big picture' patterns. Keep asking yourself "What is the main concept?" Chapter summaries will help you identify main concepts. Read them before and after each chapter. Compare and contrast the information. Try outlines and concept maps. Don't get buried in the details-most are meant to support main concepts. This course has amazing breadth; **DO NOT TRY TO CRAM!**

### **University Policies:**

- **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 accommodation 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.
- **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 disability, veteran's status 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).
- **Attendance/tardy policy:** The University expects regular attendance at all class meetings. Instructors must communicate any particular attendance requirements of the

course to students in writing on or before the first class meeting. Students are responsible for acquainting themselves with and satisfying the entire range of academic objectives and requirements as defined by the instructor.

- **Wellness statement:** 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 at [www.wellness.utah.edu](http://www.wellness.utah.edu) or (801)581-7776.
- **Veterans Center:** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/> Please also let me know if you need any additional support in this class for any reason.
- **LGBT Resource Center:** If you are a member of the LGBTQ community, the U of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Oplin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: <http://lgbt.utah.edu/> Please also let me know if there is any additional support you need in this class.
- **Learners of English as an Additional/Second Language:** If you are an English language learner, please be aware of 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 Program (<http://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.

### Course Schedule:

Date	Daily	Reading 5 <sup>th</sup> Ed.	Reading 6 <sup>th</sup> Ed.	Homework Due
<b>T Jan 8</b>	Introduction, Scientific Process	Ch. 1	Ch. 1	
Th Jan 10	Biology and the Tree of Life, Chemistry of Life	Ch. 1, 2	Ch. 1, 2	
<b>T Jan 15</b>	Chemistry of Life	Ch. 2	Ch. 2	MB week 1
Th Jan 17	Proteins, Nucleic Acids	Ch. 3, 4	Ch. 3, 4	
<b>T Jan 22</b>	Carbohydrates, Lipids	Ch. 5, 6	Ch. 5, 6	MB week 2
Th Jan 24	Inside the Cell	Ch. 7	Ch. 7	
<b>T Jan 29</b>	<b>REVIEW, EXAM I – Ch. 1-7</b>			MB week 3
Th Jan 31	Energy and Enzymes	Ch. 8	Ch. 8	
<b>T Feb 5</b>	Cellular Respiration and Fermentation	Ch. 9	Ch. 9	MB week 4
Th Feb 7	Cellular Respiration and Fermentation, Review Exam 1	Ch. 9	Ch. 9	
<b>T Feb 12</b>	Photosynthesis	Ch. 10	Ch. 10	MB week 5
Th Feb 14	The Cell Cycle, Meiosis	Ch. 12, 13	Ch. 12, 13	Case Study 1
<b>T Feb 19</b>	Meiosis, Mendel and the Gene	Ch. 13, 14	Ch. 13, 14	MB week 6
Th Feb 21	Mendel and the Gene	Ch. 14	Ch. 14	
<b>T Feb 26</b>	<b>REVIEW, EXAM II – Ch. 8-10, 12-14</b>			MB week 7
Th Feb 28	DNA and the Gene, How Genes Work	Ch.15, 16	Ch.15, 16	
<b>T Mar 5</b>	Transcription, RNA Processing & Translation	Ch. 17	Ch. 17	MB week 8
Th Mar 7	Evolution by Natural Selection, Review Exam 2	Ch. 25	Ch. 22	Case Study 2
<b>T Mar 12</b>	<b>SPRING BREAK</b>			
Th Mar 14				
<b>T Mar 19</b>	Evolution by Natural Selection	Ch. 25	Ch. 22	MB week 9
Th Mar 21	Evolutionary Processes	Ch. 26	Ch. 23	
<b>T Mar 26</b>	Evolutionary Processes, Speciation	Ch. 26, 27	Ch. 23, 24	MB week 10
Th Mar 28	<b>REVIEW, EXAM III – Ch. 15-17, 22, 23 (6<sup>th</sup> Ed)</b>			
<b>T Apr 2</b>	Phylogenies and History of Life	Ch. 28	Ch. 25	MB week 11
Th Apr 4	Introduction to Ecology, Behavioral Ecology	Ch. 52, 53	Ch. 49, 50	
<b>T Apr 9</b>	Population Ecology, Review Exam 3	Ch. 54	Ch. 51	MB week 12
Th Apr 11	Community Ecology, Ecosystems and Global Ecology	Ch. 55, 56	Ch. 52, 53	
<b>T Apr 16</b>	Biodiversity and Conservation	Ch. 57	Ch. 54	MB week 13
Th Apr 18	<b>REVIEW, EXAM IV – Ch. 24, 25, 49-54 (6<sup>th</sup> Ed)</b>			
<b>T Apr 23</b>	<b>REVIEW for Final, FINAL EXAM</b>			MB week 14

\*Note: This syllabus is meant to serve as an outline and guide for our course, exam dates, quizzes and homework due dates are firm, but topics covered in class may change.

\*MB = MasteringBiology assignments