Biology 211– Principles of Biology I

Spring 2021
Online for Covid-19, Iowa State University

Instructor
Dr. Lori Biederman
Please email via Inbox on Canvas, I regularly check email Monday thru Friday from 8 am to 4 pm I find the Webex Office hours function clunky, it is easier for you to use this link for Virtual appointments: calendly.com/oriannbiederman or contact me (via Inbox) to arrange a meeting. Once a time is settled, I will send a link for a webex conference.

Course description
This course is an introduction to the study of life on Earth. We will explore the diversity of life, the basis of heredity and evolution, and the principles of ecology. Concurrent enrollment in 211L is strongly recommended.

Course format
This course will be online due to COVID-19. It will have 6 sections; each section will have a single due date for all homework and exam materials. The subsequent section will be available after its predecessor’s due date. This flexible, single due-date structure is to accommodate potential illness during the semester. You are strongly encouraged to keep ahead and find ways to stay on track.

Course goals
- An accurate understanding of the nature of science
- A broad understanding of the diversity of life
- A deep understanding of how biological information is passed from one generation of living organisms to the next.
- A thorough understanding of biological evolution and the overwhelming evidence from multiple disciplines supporting biological evolution.
- A wide-ranging understanding that all organisms (including humans) have ecological relationships with other members of their species, other species, and their abiotic environment.

Learning objectives
1) Understand, and properly use, the language of biological diversity, genetics, evolution, and ecology
2) Recognize, compare, and contrast many of the major groups of organisms on Planet Earth
3) Describe and apply the basic principles of inheritance
4) Describe the theory of evolution, the evidence supporting it, and the mechanisms of evolution
5) Describe ecological principles that apply at population through ecosystem levels
6) Understand how the process of science works and the role that evidence plays in scientific conclusions
7) Develop an increased understanding of some local biological diversity and ecological issues
8) Work together in a group to effectively discuss issues in biology making use of appropriate terms and concepts

Individual learning objectives for each unit are available on Canvas within each unit’s modules.

Course Materials

Textbook
Biological Science, 7th edition by Freeman et al., will be automatically delivered to your Canvas class. It will be billed to your Ubill and you will be refunded if you drop the class within a window of time. You are welcome to buy the physical book (optional) at the bookstore, or an older edition online. Be aware that the older edition may not be perfectly aligned with the current one.

Mastering Biology
As part of the required package you will get the E-text and Mastering Biology. Please see the page "Connecting Canvas to MyLab and Mastering" in the “Start Here” module on Canvas for complete details.

Webex
This course will use Webex for synchronous online interactions. Visit the Webex learning tool guide to view the terms of service, privacy policy, accessibility statement, and steps for getting started with Webex.

Assessment

Homework
Most homework will be administered through Mastering Biology, which is part of the textbook package. Always access Mastering Biology through Canvas (rather than directly through a Pearson website). I have assigned the “Dynamic Study Modules” which will continue to ask questions until you successfully answer them. These homeworks are due at the end of each section, which close at 11:59 pm on dates below. Late homework will receive 0 points. Note that it takes around 2 hours for Canvas and Mastering to communicate. Homework is approximately 23% of your grade.

Exams
There will be 6 unit exams, worth 50 points each. Questions will be primarily multiple-choice, but may include true/false, fill in the blank, and other types of questions. You may use written notes, but NO electronic resources while taking the exam. Exams will be administered through Canvas. Exams are worth approximately 77% of your grade.
**Extra credit**

There are two opportunities for extra credit. In this class, extra credit means that each of you has X + 8 opportunities to earn the X number of points required for a perfect score (100%) in this class. At the end of the semester all of the points you’ve accumulated (including "extra credit" points) will be added together and divided by X to determine what percentage of the possible points you’ve earned. Your course grade will be based on this percent.

**Section due dates**

Section 1: Phylogenies, Prokaryotes, & Protists – Sunday, February 7
Section 2: Introduction to animals thru Protostomes – Sunday, February 21
Section 3: Deuterostome animals & Fungi – Sunday, March 7
Section 4: Plants & Viruses – Sunday, March 21
Section 5: Mendelian genetics & Evolution – Sunday, April 11
Section 6: Ecology – Thursday, May 6

**Grade scale**

A = 100-93%; A- = 92-90%; B+ = 89-87%; B = 86-83%; B- = 82-80%; C+ = 79-77%; C = 76-73%;
C- = 72-70%; D+ = 69-67%; D = 66-63%; D- = 62-60%; F = 59-0%

Questions? First, please read the entire “Grade information” section on the “Syllabus and course information” page in canvas (Start here module). Then if you still have questions, email me via Canvas.

**Supplemental instruction**

The Supplemental Instruction (SI) Leader for this course attends all classes and then schedules weekly meetings for students. The times and meetings will be announced during the first week of class. Students should come to these meetings with questions regarding material covered in the text and lectures. SI meetings are *optional* and are not meant to be substitute for class, but provide for small-group discussion of information from class and reading. Students that participate in SI have better grades and better understanding of the course material. See course website for SI instructor link.

**Recommended learning process**

For each of the 6 sections you will be asked to do the following, which are listed in the module.

1. Read associated chapter in your textbook
2. Do homework, which is a Dynamic Study Module withing Mastering Biology
3. Watch the associated lectures
4. Review additional posted material, attend live sessions, etc.
5. Study for exam. See Canvas “Start here” module for study hints
6. Take exam
**Accessibility statement**
Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

**Academic dishonesty**
The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office.

**Harassment and discrimination**
Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email eooffice@iastate.edu.

**First amendment statement**
Iowa State University supports and upholds the first amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

**Religious accommodation**
Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation
with your professor at the earliest possible time. You or your instructor may also seek assistance from the Dean of Students Office at 515-294-1020 or the Office of Equal Opportunity at 515-294-7612.

**Contact information**

If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.