Bi 212-002: Principles of Biology II

Winter 2019 Portland State University 4 credits

Instructor	Dr. Mandy Cook
Email	use D2L online course email
Office Hours	**MW** following lecture, *or* by appointment
Lectures	Section 002: MW 1840-2030, Hoffmann Hall 109, CRN 40338 *(Section 001: MWF 1000-1105, RLSB 1A001, CRN 40337)*
Pre- and co-requisites	Bi215: Principles of Biology Laboratory II Chemistry 221 and 227 (or concurrent enrollment)
Course Materials	**REQUIRED**: "Biological Science" by Scott Freeman, 6th edition **REQUIRED**: i>clicker (*or* i>clicker2 *or* i>clicker+) **REQUIRED**: four #SC982-E Scantrons (full page); #2 pencil; photo ID **REQUIRED**: Laboratory materials, posted on D2L OPTIONAL: "Study Guide for Biological Science", 6th edition OPTIONAL: MasteringBiology course access
Course Description	The Principles of Biology sequence (Bi 211/214, 212/215, and 213/216) introduces the foundations of life science. In Bi 212/215 we examine the development, evolution, and ecology of living organisms. Specific topics include plant and animal development, natural selection, evolutionary processes, phylogenetics, speciation, form & function of organisms, biodiversity, and the introduction of major phyla.
Lab	Bi 215 is a co-requisite lab course for Bi 212. Though the course has a separate instructor and you'll receive a separate grade, you must register for Bi 215 in addition to Bi 212. **You must attend the first lab to maintain your spot in this class. You may be dropped from the course if you do not arrive within the first 15 minutes.**
Learning Objectives	Upon completion of Bi 212 and Bi215, students should be able to: • Describe the underlying processes determining the reproduction and development of different organisms • Define the evolutionary mechanisms representing the basis of biodiversity • Describe the four evolutionary processes that change allele frequencies in populations • Define a species and describe phylogenetic trees • Compare and contrast lifecycles of different organismal groups • Describe the diversification of plant and animal life • Explain the physiological processes in plants • Explain how genetic information influences traits in individuals and their offspring • Effectively utilize the vocabulary of developmental biology, evolution, and phylogenetics
Skills Development	During Bi212 and Bi215, students will learn how to: • Identify key organismal groups • Create tables and graphs for reporting experimentally-derived data

- Communicate observations, experimental design, execution, and outcomes using a formal laboratory report format
- Apply common laboratory tools and physiological assays
- Communicate an understanding of phylogenics through the generation of a formal species account
- Scientifically dissect preserved plant and animal specimens
- Work cooperatively to solve scientific problems and carry out organized experimentation
- Grasp scientific presentations
- Read and analyze selections from the primary scientific literature

Course Web Page

The PSU online resource "Desire 2 Learn (D2L)" will be used for posting lecture notes, announcements, exam grades, and other course materials. Log in at http://www.pdx.edu/psuonline/ or directly at https://d2l.pdx.edu.

Important Dates

Jan 13	Drop deadline (100% refund)
Jan 21	MLK Jr. Day – No lecture; ***Monday labs are rescheduled***
Jan 30	**Lecture Exam 1**
Feb 20	**Lecture Exam 2**
Feb 24	Grading option change/withdraw deadline
Mar 13	**Lecture Exam 3**
Mar 18	**Final Exam 1930-2120 Hoffmann Hall 109**

Grading

Classroom response ("i>clicker") questions: 10%
Reading quizzes (best 5 of 6): 2% each (total of 10%)
Class exams (best 2 of 3): 25% each (total of 50%)
Comprehensive final exam: 30%

Exams

There will be three class exams. Your lowest class exam score will be dropped. If you are unable to make it to a class exam for any reason, it will be dropped as your lowest score. **No make-up exams will be given.** The final exam will cover the whole course, and **cannot** be dropped. If you know that you will need to miss two class exams or the final exam, you should not take Bi212 this term.

Online Quizzes

Throughout the course there will be 6, 5-question online reading quizzes that are to be taken through D2L. These quizzes must be completed by the announced due date and time in order to receive a grade. **There will be no make-up or late quizzes.** Quizzes will be posted by Sunday, 6 pm and you will have 72 hours to complete the quizzes (Wednesday, 6 pm). Once you begin the quiz, you will have 120 minutes to complete the quiz. You may not take multiple attempts at the quiz.

Grading Policy

Grades will be assigned according to the percentage of possible points earned. As a rough guide, the top score on any given exam can be thought of as 100%. If you earn at least 90% of the highest score you will receive an A- or higher; if you earn at least 80% you will receive a B- or higher; if you earn at least 70% of the possible points you will receive a C- or higher; if you earn at least 60% of the possible points you will receive a D- or higher.

Incompletes

PSU's policy on the temporary grade of Incomplete ("I") is strictly adhered to in this course. Please note, you must be passing the course (with a C- or better) in order to be eligible for an incomplete. See the PSU Bulletin for more information: http://www.pdx.edu/oaa/psu-bulletin.

Classroom Response

Each lecture session will include questions to be answered using the required i>clickers. **Week 1 clicker questions will not be graded; weeks 2-10 will count toward your grade.** You will receive 0.5 points for incorrect answers and 1.0 for each correct answer. At the end of the term, if you have earned 75% or more of the possible clicker points, you will receive full clicker points. **Missed clicker questions cannot be made up.** You must be physically present to answer clicker questions. Clickers cannot be shared by students. Any instance of cheating with clickers will result in a zero for the final clicker grade. **USE FREQUENCY AA IN CLASS.**

i>clicker Registration

To receive clicker grades, you must register your clicker online, and associate it with your **PSU ODIN ID login name** by Wednesday of Week 1. There are two ways to register your clicker:

1. Login to D2L, click on this course (Bi212 – Principles of Biology II) and find the i>clicker registration link in the i>clicker registration module under Activities/Course Content. Enter your Remote ID. The Remote ID is the 8-character alphanumeric code printed below the barcode on the back of your remote, or within the battery compartment. This should link automatically to your D2L account.

2. To register online, go to http://www.iclicker.com/ and click the 'Register' button.

    a. Enter your First Name and Last Name in the appropriate fields.
    b. In the "student ID" field, enter your ODIN ID (Use your ODIN username/login, NOT your 9-digit number). For example, if your PSU email address happens to be gangnamstyle1996 *at* pdx.edu, your ODIN ID is gangnamstyle1996.
    c. Enter your Remote ID. The Remote ID is the 8-character alphanumeric code printed below the barcode on the back of your remote, or within the battery compartment.
    d. Enter the letters or numbers in the Image Code on the screen. You can request another image if you find the first hard to read, or play an audio reading of it instead.
    e. Click the Register button. An on-screen message confirms that registration was successful. Your PSU Odin ID login is now associated with your unique i>clicker remote ID, and your clicker answers can now be graded.

Classroom Policies

Academic Honesty

Cheating or plagiarism of any kind will not be tolerated. See the PSU "Code of Student Conduct and Responsibility" for more information: http://www.pdx.edu/dos/codeofconduct. If cheating occurs, the grade for the

assignment will be a zero, and will not be dropped as a lowest score. The student will be reported to University officials as described in the Code (577-031-0142: Procedures for Complaints of Academic Misconduct).

Academic Courtesy

Respect the rights of fellow students during the class period. Please avoid talking and other distracting behavior, and turn phones off.

Schedule

Students are expected to arrive for class on time so that lectures and labs begin and end according to schedule. Since the Robertson Life Sciences Building (RLSB) is separate from the main Portland State campus, it is important that you carefully plan your schedule to account for the extra travel time required. Information about transportation options can be found here: http://www.pdx.edu/transportation/clsb.

Facilities

Everyone is expected to help maintain the appearance of the classroom and laboratory. After class, all trash should be removed and discarded appropriately; lab benches should be left clean and organized.

Access and Inclusion for Students with Disabilities

If you have a disability and are in need of academic accommodation: first register with the Disability Resource Center (503)725-4150, http://www.drc.pdx.edu/, and then notify Dr. Cook to make appropriate arrangements. **Students with testing accommodation *must* take exams at the PSU Testing Center on the same day as scheduled lecture exams. No exceptions.** Schedule exams at the PSU Testing Center (UCB 340) as soon as possible to ensure a spot. **Please e-mail your appointment times for all 4 exams to Dr. Cook by 5pm on Monday of week 2.**

Safe Campus Module

Portland State University is committed to creating a safe campus for all students, and as part of this, you are required to complete the Safe Campus Module in D2L. Log in to D2L, and under "My Courses", you'll find a sub-tab titled "Ongoing." Under the "Ongoing" sub-tab, you will see a course titled "Creating a Safe Campus." Click on this course and follow the prompts to complete the module.

Emergency Info

If you are off-campus or walking to campus dial **911**.
PSU 24-hr Campus Safety: emergency **503-725-4404**, non-emergency 503-725-4407
The physical address of Hoffmann Hall is: 1833 SW 11th, Portland, Oregon 97201

Title IX

As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. We expect a culture of professionalism and mutual respect in our department and class. You may report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the Office of Equity and Compliance or the Office of the Dean of Student Life. Please be aware that as a faculty member, I have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment or sexual violence to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals (http://www.pdx.edu/sexual-assault/get-help). For more information about Title IX, please complete the required student module Creating a Safe Campus in your D2L.

Other PSU Resources

Student Health and Counseling: 503-725-2800; https://www.pdx.edu/shac/
Women's Resource Center: 503-725-5672; http://www.pdx.edu/wrc/
Global Diversity and Inclusion: 503-725-5919; http://www.pdx.edu/diversity/
C.A.R.E. Team: 503-725-5341; http://www.pdx.edu/dos/care-team

Creating an Equitable Learning Environment

Discussion in this class will be conducted in adherence to the University nondiscrimination policy.

- We should respect diverse points of view. We do not need to come to an agreement on any particular issue: we can agree to disagree.
- Our use of language should be respectful of other persons or groups. (As your instructor, I will not let injurious statements pass without comment.)
- You need not represent any group, only yourself, though you may choose to represent a group if you wish.
- If you feel uncomfortable about any aspect of the class environment, it is your responsibility to discuss it with the instructor.

Providing Academic and Employment Support to Students

PSU is committed to providing students with an educational environment where students may thrive in their educational pursuits. Incidents of interpersonal violence or sexual harassment may create barriers to students completing their education. We at Portland State support students to help them overcome these barriers. PSU's Dean of Student Life, Title IX Coordinator, Interpersonal Violence (IPV) Advocates and CARE team are committed to assisting students who have experienced any form of sexual harassment or interpersonal violence.
Title IX of the Educational Act of 1972 requires educational institutions (PSU) to provide academic and employment support to students and/or employees, including student employees, who experience sexual harassment, sexual assault or any other form of interpersonal violence. Academic and employment support includes, but is not limited to,

- Providing additional time to complete assignments or to take exams;
- Completing the course without attending the lectures;
- Providing academic support, such as tutoring;
- Arranging to have extra time to complete or re-take a course or withdraw from a course without an academic or financial penalty;
- Providing a No Contact Order (NCO) between the victim and the alleged perpetrator, where the victim and the alleged perpetrator may not contact each other;
- Changing the alleged perpetrator or the victim's course to prevent both students from being in the same course;
- Providing excused absence from employment with PSU for a reasonable time;
- Changing hours of employment or department of employment at PSU.

PSU must provide these academic and/or employment supports whether or not the student decides to report the matter to Office of the Dean of Student Life or the Office of Equity and Compliance. An IPV Confidential Advocate, the CARE Team Case Manager, the Assistant Dean/Director of Conduct and Community Standards or the Title IX Coordinator may contact a faculty member/instructor and/or a supervisor to arrange for academic and/or employment support for a student or employee who has experienced interpersonal violence. If a faculty member or supervisor has any questions about providing the academic or employment support, the faculty member should contact PSU's Title IX and 504/ADA Coordinator, Julie Caron, at jucaron@pdx.edu or 503-725-4410.

Tips for Success

If you are unfamiliar with college coursework, I recommend you stop by PSU's Learning Center (http://www.pdx.edu/tutoring/). Located on the second floor of the PSU Library, room 245, they can help you with your current coursework, and can assist you in developing effective learning strategies.

Be an active learner. Read relevant materials ahead of class. Attend all lectures. You are responsible for all topics discussed in the lecture, even if they do not appear in the online notes. Take notes during class – do not rely on the printed-out class notes alone. Write down questions that come to mind during the lecture. Identify points in the lecture that you think are the main points. Review your notes after class, incorporating details that you remember but didn't get written down. While you are reading the textbook, take time to think about what you are reading. How does it fit with what you know already? Combine the information from the lecture and the text into one set of complete notes to review and study. Try the Cornell System of note-taking and review: a simple but powerful method for studying.
See: http://lsc.sas.cornell.edu/LSC_Resources/cornellsystem.pdf or
http://lsc.cornell.edu/Sidebars/Study_Skills_Resources/SKResources.html

Figure out and use your learning strengths. Learning styles vary from person to person. You might do your best studying through reading, writing, or drawing, or through discussion with fellow students. Most likely, it will take some of each to be most successful. Experiment, and use the techniques that work best for you.

Spend time on this course. Schedule and spend time reading and reviewing course materials. Revisit your notes, and think about the logical structure underlying the subjects. Plan on spending a significant amount of time (10-15+ hours/week) working on this course. Later topics build upon earlier portions of the course: please do not let yourself fall behind.

Ask for help if you need it. Come to my office hours, talk to your TA, find a study partner or study group, use the Discussions board on D2L, etc. You'll make the best progress when you work to identify the areas you need to work on, and are active about seeking guidance.

Use the University resources. Campus services are available to help you with all aspects of your education, see http://www.pdx.edu/studentaffairs. The Undergraduate Advising and Support Center (UASC), 425 Smith, http://www.pdx.edu/advising/academic-resources-and-services, offers academic advising and referral, academic support programs, community college relations, disability resource center, athletics advising, study skills workshops, tutorial programs, and veteran services. The Learning Center offers tutoring in many subjects (including Biology), as well as various workshops, see http://www.pdx.edu/tutoring/.

Week	Dates	Scheduled Topics Lecture topics may change from those listed in the syllabus. **Exams will be given as scheduled.**
1	Jan 7 – Jan 11	**Lecture:** Introduction; Animal & plant development **Text:** Chapter 21 **Lab:** 1: Orientation; Developmental biology
2	Jan 14 – Jan 18 **QUIZ**	**Lecture:** Natural selection; Evolutionary processes **Text:** Chapters 22 & 23 **Lab:** 2: Natural selection **READING QUIZ 1 DUE JAN 16, 6pm**
3	Jan 21 – Jan 25 **QUIZ**	**Lecture:** Speciation **Text:** Chapter 24 **Lab:** 3: Cnidarians, platyhelminthes, nematodes, & annelids **READING QUIZ 2 DUE JAN 23, 6pm** *No lecture or labs on Monday, Jan 21 (MLK, Jr. Day)* *MONDAY LABS ARE RESCHEDULED*
4	Jan 28 – Feb 1 **EXAM**	**Lecture:** Phylogenies & the history of life; Protists **Text:** Chapters 25 & 27 **Lab:** 4: Molluscs **HOUR EXAM 1 on Wednesday, January 30**
5	Feb 4 – Feb 8 **QUIZ**	**Lecture:** Fungi; Taxonomy & introduction to animals **Text:** Chapters 29 & 30 **Lab:** 5: Arthropods **READING QUIZ 3 DUE FEB 6, 6pm**
6	Feb 11 – Feb 15 **QUIZ**	**Lecture:** Protostomes; Deuterostomes **Text:** Chapters 31 & 32 **Lab:** 6: Phylogeny & comparative anatomy of deuterostomes **READING QUIZ 4 DUE FEB 13, 6pm**
7	Feb 18 – Feb 22 **EXAM**	**Lecture:** Plant form & function **Text:** Chapter 34 **Lab:** 7: Photosynthesis & plant pigments **HOUR EXAM 2 on Wednesday, February 20**
8	Feb 25 – Mar 1 **QUIZ**	**Lecture:** Plant reproduction; Phylogeny (Green algae & land plants) **Text:** Chapters 38 & 28 **Lab:** 8: Vegetative structure & function **READING QUIZ 5 DUE FEB 27, 6pm**
9	Mar 4 – Mar 8 **QUIZ**	**Lecture:** Water & sugar transport; Plant nutrition **Text:** Chapters 35 & 36 **Lab:** 9: Stomatal density **READING QUIZ 6 DUE MAR 6, 6pm**
10	Mar 11 – Mar 15 **EXAM**	**Lecture:** Plant sensory systems; *optional review session after Exam 3 on March 13* **Text:** Chapter 37 **Lab:** 10: Reproduction; SPECIES ACCOUNTS DUE **HOUR EXAM 3 on Wednesday, March 13**
Finals	Mar 18 – Mar 22	**COMPREHENSIVE FINAL EXAM** **MONDAY, March 18 1930 – 2120**