

BI 216: Principles of Biology III, Laboratory Spring 2020

Instructor	Dr. Erin Shortlidge Office: SB1 522b Email: eshortlidge@pdx.edu Office Hours: by appointment
Lead Lab Teaching Asst.	Name: Brent Bever Email: bever2@pdx.edu Open office Hours: Fridays at 10am, or by appointment
Course Description	The Principles of Biology sequence (BI 211, 212, & 213, along with labs BI 214, 215 & 216) introduces the foundations of life science. In BI 213 and 216 we examine how biotic and abiotic factors impact living organisms and the physiological underpinnings that allow organisms to survive. Specific topics include ecology, physiology, organismal systems (water balance, gas exchange, nervous, circulatory, endocrine), community and population ecology, biodiversity and conservation.
Co-requisite	Biology 213, Principles of Biology III.
Required Items	The syllabus and lab manual will be available for download from the D2L course page.
Learning Objectives	Upon completion of BI 213 and BI 216, students should be able to: <ul style="list-style-type: none">• Recognize and be able to discuss the connections between organismal structure and function• Understand the importance of information flow in biology• Understand how abiotic factors select for organismal adaptation and impact functional biology• Have a general understanding of animal physiological systems• Comprehend how organisms interact with one another and their environments as individuals and as systems• Compare and contrast levels of ecology• Understand basic global cycles• Find the connection of biology to "the real world" and your lives• Understand and experience the "nature of science" and the process of science
Skills Development	During this course, students will learn how to: <ul style="list-style-type: none">• Utilize and work within online platforms• Generate hypotheses and test them experimentally• Understand and create tables and graphs for reporting experimentally derived data• Communicate science in writing using a laboratory report format• Know how common laboratory tools and skills may be applied to research questions

- Collect and record online data that is precise and accurate
- Work cooperatively to solve scientific problems and carry out organized experimentation
- Present information in a manner that is understandable to nonscientists as well as your peers
- Read and analyze selections from the primary scientific literature
- Learn to decipher between reliable and non-reliable sources of scientific information
- Engage in productive, respectful discourse with peers and instructors
- Think critically and creatively to solve and test problems

Course Web Pages

We will use the PSU online resource "D2L" for posting the lab manual, daily notes, announcements, exam grades, and other course materials. Log in at <https://d2l.pdx.edu>. **Check D2L regularly!**

Grading

The lab, while a component of the first term of Principles of Biology, is its own 1-credit course as BI216. Points will be earned from quiz scores, lab write-ups, and a formal lab presentation.

Grading Policy

Grades will be assigned according to the percentage of possible points earned. As a rough guide, the highest cumulative score 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.

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 "I" grade. See the PSU Bulletin for more information: <http://www.pdx.edu/oaa/psu-bulletin>.

Disability

If you have a disability and are in need of academic accommodation visit: <http://www.pdx.edu/drc/prospective-students>. You may also contact the Disability Resource Center (DRC) front desk at 503-725-4150, email them at drc@pdx.edu, or stop by their office at S.M.S.U. 116. **First** register with the DRC, **then** notify Dr. Shortlidge to make appropriate arrangements. *Note:* exams taken at the PSU Testing Center must be taken at the same time as class exams - **no exceptions**. Schedule exams at the Testing Center as soon as possible to ensure a spot. If for some reason you are unable to schedule any of your exams at the Testing Center for the appropriate time, let me know as soon as possible so I can arrange an alternative testing location.

Quizzes

NO MAKE-UP QUIZZES.

- **Quizzes will be taken on D2L.** You will have 48 hours to complete the quiz, it will open 48 hours before your lab begins and end at the time your lab begins (i.e. 9am Thursday lab: Quiz open from 9am Wed- 9am Thurs). **You will have one attempt at the quiz, 60 minutes to complete it.** There will be one question (or 20%) on the current lab, so be sure you read and

understand the lab before you take the quiz. Quizzes missed for any reason cannot be made up.

- There will be a quiz every week except for Week 1. There will be a quiz every week except for Week 1.
- Nine quizzes, five points each. **The lowest two quiz scores will be automatically dropped: 35 points total.**

Lab write-ups

No Lab Make-ups

- You must complete each lab, and answer all questions assignments as outlined by your TA to receive full credit.
- There are 9 standard lab write-ups, worth 20 pts each. **The lowest two scores will be automatically dropped: 140 points total.**
- Lab write-ups are submitted online through the D2L website, please refer to your TA's specific instructions as each week may vary.
 - Assignments this term will be submitted through D2L's dropbox. Below are some guidelines for the documents you will turn in.
 - Embed all figures and tables into your Word (or other word processing program) file.
 - Be sure all captions are in the right place, and that your figures and tables are fully visible.
 - Include your name and lab section on all assignments.
 - Type the lab questions (**in bold**) and answers (not in bold). Check twice that you've answered every part of the question!
 - Once everything is complete, save the file as a PDF - this way your file will retain all of the beautiful formatting you worked so hard at. Ask your TA how to do this if you don't know.
 - Check your document before submitting it!
 - Assignments are considered late if they are submitted even one minute after the start of class.
 - If you have changes to make after you've turned something in, do so BEFORE the assignment is due, re-save the entire document as a PDF, and re-submit it. The most recent submission will be graded.
 - **Most importantly:** If you have a problem with D2L submission, contact your TA immediately!
- **Lab write-ups are due the week after each lab is performed, before the start of your next lab time.** Labs that are submitted late (after class starts) will automatically be reduced by 5 points before grading. Labs may not be submitted more than one week late.
- *Drawings* need to be large enough for clarity, and labeled with the name of the item, its size, and any of its parts named in the lab notebook.
- Responses to weekly lab questions need to be typewritten in complete sentences.
- Show any necessary calculations.
- All submitted assignments **MUST** have your name on them. If you miss the lab for any reason and do not discuss your absence with your TA, you will not get points for that lab write-up.

Presentation

Week 10 you will give a short in-class presentation with your lab partners and complete both peer and self assessments of the presentations. **Lab 10**

is worth 30 points. You will not be able to drop Lab 10. Details will be provided by your TA.

Attendance

Remote Attendance (via Zoom) is required for success in this course. You must stay for the entire lab and actively participate. There is a participation component to each lab report and lack of participation will result in the automatic loss of points for that lab's write-up. **If you do not show up to a lab, you may not turn in a lab report for that lab.**

- Missed lab sections cannot be made up. The missed lab session can be dropped at the end of the quarter as your lowest score.
- **Labs will not meet on Monday the PSU Memorial Day holiday.** These labs will be made up on a different day--your TAs will have the details.

General Guidelines

Read the lab ahead of time.

IV. Principles of Biology and Plagiarism

The rules concerning plagiarism are very important to know and follow. The PSU policy on academic dishonesty, including plagiarism, is available online (<http://pdx.edu/dos/psu-student-code-conduct>). Academic dishonesty will result in disciplinary action, ranging from a zero on an assignment, to a failing grade for the course, to expulsion from the University. This short guide contains recommendations regarding plagiarism and specific situations you may encounter in BI 214, 215, and 216.

Can I use outside sources for my lab reports? If so, how do I do this properly?

Do **not** use outside sources if a lab report question says:

"In your opinion..."

"Based on your observations in lab..."

If you **can** use outside sources:

- The source material must be paraphrased (put into your own words). One way to be sure you are paraphrasing: read the source materials, take notes on them, and then write your answer based on your notes.
- The source must be properly cited. See <http://owl.english.purdue.edu/owl/resource/747/01/> for MLA style guidelines.

Example: "Murray and Henderson suggested that the moon is made of cheese (Murray, E. and Henderson, L. Journal of the Imagination, Aug 1895, 143-145, print)."

Can I collaborate with fellow students? If so, how do I do this properly?

Although you will often work in groups, each person gets graded individually. Treat a lab discussion like you would when paraphrasing an outside source. Feel free to discuss the answers to the lab questions and take notes on your discussion points. Write your final answers later, on your own, based on these notes.

Developing computer and software skills is an important goal of this class. If one person creates all the graphs and tables for the whole group, those goals will not be reached. Unless noted otherwise, you must create your **own** graphs and tables from the data sets gathered by your lab group.

Quizzes are never collaborative!

When in doubt, ask!

You cannot get in trouble for asking your TA **any** question. Here are some examples that can get you on the right track if you're concerned about plagiarism:

"Is it ok if I answer my questions like this?"

"How much can my tablemates and I collaborate on this section?"

For more information, see:

<http://guides.library.pdx.edu/biology> - The Biology research home page at the library, contact the Biology librarian for support!

<http://guides.library.pdx.edu/cite> - A handy tutorial on citing sources from the PSU Library

http://www.writingcenter.pdx.edu/resources/library.php?step09_detail_5.html - PSU's Writing Center resources about plagiarism

Emergency Information In case of emergency, if you are inside CLSB dial **503-494-4444**. If you are outside the building or walking back to campus dial **911**.

PSU 24 hour Campus Safety: emergency 503-725-4404, non-emergency 503-725-4407

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: 725-5919, <http://www.pdx.edu/diversity/>
C.A.R.E Team: 503-725-4422, <http://www.pdx.edu/dos/care-team>
PSU Food Pantry: <https://www.pdx.edu/insidepsu/free-food-on-campus>
Office of Information Technology: <https://www.pdx.edu/oit/>

COVID-19

Portland State has been working diligently to address the health, safety, and well-being needs of the entire PSU community during the COVID-19 pandemic. Every effort is being made to provide an accurate and efficient flow of communication to all students, staff, and faculty. As questions and concerns arise, a multitude of campus resources are available to you. If you are ever unsure how to find a resource you need or want, explore the College of Liberal Arts and Sciences' website at pdx.edu/clas/covid-19-resources-for-students. Help is near. Reach out.

Remote Learning Kit: <https://pdx.pressbooks.pub/remotelearningkit/>

Virtual Classroom

We will use technology for virtual meetings and recordings in this course. Our use of such technology is governed by FERPA, the [Acceptable Use Policy](#) and PSU's [Student Code of Conduct](#). A record of all meetings and recordings is kept and stored by PSU, in accordance with

the Acceptable Use Policy and FERPA. Your instructor will not share recordings of your class activities outside of course participants, which include your fellow students, TAs/GAs/Mentors, and any guest faculty or community based learning partners that we may engage with. You may not share recordings outside of this course. Doing so may result in disciplinary action.

Learning Center - supporting you with [academic coaching](#) and [tutoring](#) 100% remotely during spring term. The LC is *not* reducing our hours for spring term. Our staff is available via phone and email for questions, as well as to schedule academic coaching appointments.

Academic Coaching

- All academic coaching appointments will occur over Zoom
- Our coaches are here to support you on your path to academic success including navigating your courses in the online environment
- Schedule an appointment by calling 503-725-4448 or fill out the [Academic Coaching Interest Form](#)

Tutoring

- All tutoring services will be offered by 30-minute appointments booked using the Penji app
- Sessions will occur over Zoom
- See our [website](#) for more information

BI 216 Laboratory Schedule

Week	Lab	Quiz	Homework – Lab Write-ups
------	-----	------	--------------------------

Week 1	Lab 1: Scientific Literature	--	L1 Questions
Week 2	Lab 2: Data analysis and R	Quiz 1	L2 Questions
Week 3	Lab 3: Water Quality	Quiz 2	L3 Questions
Week 4	Lab 4: Tonicity	Quiz 3	L4 Questions
Week 5	Lab 5: Nervous System	Quiz 4	L5 Questions
Week 6	Lab 6: Homeostasis	Quiz 5	L6 Questions
Week 7	Lab 7: Behavioral Ecology I	Quiz 6	L7 Questions, Experimental Design
Week 8	Lab 8: Behavioral Ecology II	Quiz 7	L8 Lab Write-up
Week 9 May 27-31 (No classes Monday!)	Lab 9: Global Ecology	Quiz 8	L9 Questions/Presentation prep
Week 10	Lab 10: Presentations	Quiz 9	L10 In Class: Peer and Self Evaluations

***Labs are from the student lab manual**

Points:

Quizzes (best 7 of 9 @ 5 pts each) 35

Lab Write-ups (best 7 of 9 @ 20 pts each) 140

Presentation peer/self-evaluation (Lab 10) 30

205

Principles of Biology III Laboratory – BI216, Spring 2020

Expectations for Students

Learning in the University environment should be stimulating, demanding, and also fair. We encourage the open discussion and exchange of ideas, particularly in the laboratory setting. However, it is essential that all graded work in this course be your own work, and in your own words.

Below are the expectations for students in this class. This set of expectations is intended to maximize debate and exchange of ideas in an atmosphere of mutual respect while preserving individual ownership of ideas and written words. If you feel you do not understand or cannot agree to these expectations, you should discuss this with your instructor and classmates.

- Students are expected to work cooperatively with other members of the laboratory and show respect for the ideas and contributions of other people.
- When working as part of a group, students should strive to be good contributors to the group, to listen to others in the group and try not to dominate, and to recognize the contributions of others. Students should try to ensure that everyone in the group makes a contribution, and recognize that everyone contributes in different ways to a group process.
- Students should conduct experiments and discuss problems as part of a group, but must write lab reports and exams alone, without copying anyone else's work.

I have read and understood the expectations for students in this class. If I am uncertain about appropriate behavior in the class I will ask one of the instructors for clarification. I understand that **any** instances of academic dishonesty will result in a zero for that assignment or exam, and will be reported to the University administration, as outlined in the course syllabus. (see the PSU "Code of Student Conduct and Responsibility" for more information:

<http://www.pdx.edu/dos/codeofconduct>)

Name (signed)

Name (printed)

Date: _____