

BIOL 114 – Organisms & Environments, Syllabus
Fall 2020

Instructor Information

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Tentative Office Hours: Thurs, 10-11am or 12-1pm; or by appointment (scheduled via email or VandalStar)

I will communicate with you by university-sponsored email. Please be sure to check your email account often, and ensure that my email address is not blocked.

CLASS TIME/LOCATION:

Lecture:

In-person: MWF 10:30-11:20am; Bruce Pittman Center, International Ballroom

On-line: asynchronously via video links posted to BbLearn/Lectures/Unit __

Lab: Labs are conducted on a weekly basis, on-line/distance format, asynchronously, on your own time. Materials and instructions are posted to BbLearn/Labs/Week __

COURSE DESCRIPTION:

In this course, you will be introduced to the evolution of life on Earth and the current diversity of organisms. Additionally, you will be exposed to current research in fields such as evolution, phylogenetics, organismal biology, and ecology. In lab, you will synthesize concepts learned in class while learning scientific techniques and skills.

Lecture format:

Due to anticipated complications arising from COVID-19 issues, attendance is not required in Biol114 this semester. You thus have two ways to gain instruction from me: 1) attend lecture in-person or 2) view lecture materials posted to BbLearn asynchronously on your own time with no in-class participation. Even if you choose option 1, all lectures after Thanksgiving Break will be on-line, per UI policy. You do not have to register for a different section or let me know which instructional method you pick. If you choose not to attend in-person on a given day, you do not have to let me know. **If you attend class in-person, masks/face coverings are required, per UI policy.**

Students often find the Biol114 material to be complex and somewhat difficult to learn. I thus typically use a variety of active learning techniques in class to assist students in learning the material. If you attend class, you can expect quiz-style questions (iClicker system), group and whole-class discussions, short videos, problem solving, and other activities on any given day.

Lab format:

Due to anticipated complications arising from COVID-19 issues, and difficulty of ensuring student/instructor safety in the close quarters of the teaching labs, all Biol114 labs are on-line and asynchronous for Fall 2020. The work usually assigned in lab has been re-formatted to allow for on-line/distance completion using BbLearn and Mastering. Each week, you will use the materials provided, complete the work asynchronously, and turn it in electronically. More information is provided in the Assessment/Lab Assignments portion of this syllabus.

Course Objectives:

The over-arching goal of Biol 114 is to prepare students for future coursework in biology-related sciences. Preparedness encompasses three general areas: 1) foundational knowledge & understanding of biology, 2) skill as a scientist, and 3) skill as a student.

By the end of the semester, a successful student will have:

- a foundational vocabulary and understanding of evolution & the tree of life, including the following core areas
 - How does evolution occur, and what evidence supports the theory of evolution? (Unit1)
 - How is the current tree of life organized, and what evidence supports it? (Units2-4)
 - What are the major distinctions between lineages in the tree of life, and why is each lineage important? (Units2-4)
 - How do ecological processes tie in with evolution? (throughout course)
- increased awareness of science as a process rather than simply a collection of facts to be memorized
- increased confidence in generating scientific hypotheses and interpreting scientific data
- increased ability to locate & communicate scientific information
- a better understanding of how he/she learns
- increased awareness of study habits helpful in science
- knowledge of the learning resources available to help them succeed

LEARNING OUTCOMES: In accordance with the University's Learning Outcomes -

Learn & Integrate: Students will synthesize biological knowledge from lectures, homework, and labs to attain an understanding of evolution, biological diversity and ecology.

Think & Create: Students will synthesize and apply their knowledge of biological processes by forming hypotheses and conducting and designing hands-on laboratory experiments.

Communicate: Students will become conversant in the language used in biology, and will practice the language of biology during laboratories, small group activities, and written assignments.

Clarify Purpose & Perspective: Students will gain an understanding of the evolutionary context of living organisms (including humans), as well as the role(s) different organisms play in their environment.

Practice Citizenship: Students will attain basic biological knowledge, which will allow them to make informed contributions to discussions of issues that impact humans and the environment, for ex: biodiversity, conservation biology, climate change, evolution education, etc...

COURSE MATERIALS

Required online material: *Modified Mastering Biology for Freeman, Biological Science, 7th Ed* (Pearson) – access code required, available through a **link in Bblearn** (this is the cheapest option) or at the UI Bookstore. You have two subscription length options – 18weeks and 24months. If you anticipate only taking this course, the 18week option through BbLearn is the cheapest. However, I use the same system in both Biol114 & 115, so if your course plan has you taking both of these courses, the 24month subscription through BbLearn is the cheapest way to go (also covers you if you need to retake a course). For those of you waiting on financial aid or other funds, there is a free 2-week trial available to cover access at the first of the semester. Warning: purchasing the access code through other sources may result in an unusable code! More purchasing info is available on BbLearn.

Required textbook: Freeman *et al.* 2020. *Biological Science*, 7th edition. Included as an e-book when you purchase the above Mastering access code through the Bookstore or BbLearn (in BbLearn you may also choose to buy the Mastering without the etext if you already have access to a physical book & don't want the ebook). May also be purchased as a hard copy book separately through BbLearn if you want one. Reading assignments will be listed on the course website and syllabus. These should be read ahead of time in preparation for the class time for which they are listed.

Clicker: *i>Clicker remotes* (or the *i>Clicker app REEF Polling*) are **recommended (but not required)**.

In-person students may use either the remote or app to participate in class. Asynchronous on-line students do not need the app or a remote (since they're asynchronous). If we are ever moved to on-line only during the semester, the app could be used to participate in live Zoom sessions, but remotes will not work in an on-line setting. Paying for a year or more's app access up front is recommended if you are taking more than one course from me, or Biol310 (genetics). Once a subscription to REEF is purchased, you can use it in multiple classes while that subscription is valid (you don't have to buy it separately for each class). Remotes are available from the UI Bookstore, on-line stores, or your friends. 'Used' remotes are acceptable.

Course website: <https://bblearn.uidaho.edu/webapps/login/>

The course website will include a copy of the syllabus; lecture and lab materials; access to MasteringBiology; links to online quizzes, tutorials and supplementary material; and grades. This will also be my primary form of communication with you outside of class. Check the website often!

ASSESSMENT:

Categories of Assessment

Category	Pts
Exams	400
Mastering	200
Laboratory	200
<i>Total Points</i>	<i>800</i>

Grading Scale

Total Points	%	Grade
720	90	A
640	80	B
560	70	C
480	60	D
<480	<60	F

I typically DO NOT curve individual exams or the course as a whole, so please don't ask. I round to the nearest whole % at the end of the semester (example: a total percentage of 89.5 would be rounded up to a 90, while an 89.4 would be rounded down to an 89).

Grade Reports

Grades will be updated on a weekly basis in BbLearn/My Gradebook. You should check these grades periodically for any mistakes in entry and to check that your overall performance is on track.

For formal grade reporting, Early Warning Grade notifications (D/F/participation issues) use the VandalStar Progress Surveys system, while Midterm and Final grades are officially entered in VandalWeb.

Exams

There will be four 'regular' exams, plus one final exam, administered on-line using BbLearn, each worth the same amount of points. Your lowest exam score will be dropped at the end of the semester (only four will count towards your final grade). With the exception of Excused Absences (see self-titled section below), there are NO makeup exams (**that's what the dropped exam is for!**)

Exams will cover material from lectures, assigned readings, assigned content on Mastering, and concepts covered in lab. The material we will cover builds upon itself. We will often refer back to concepts covered in previous lectures and units. For this reason, all exams are comprehensive, though the focus of each regular exam will be on the current unit. The final exam is comprehensive of the entire semester.

Mastering

For every unit of the course, there will be weekly homework assignments posted to Mastering. These assignments are designed to reinforce the concepts that have been covered in lecture and lab. Homework will range from multiple-choice style questions to guided activities. Homework assignments will be available starting on the Monday of the week's material they cover, and are due the following Monday. Example – the assignment covering week 1 lecture material opens on Monday, Aug. 24, at 10am. You have that week and the weekend to complete the assignment, and it is due the following Monday, Aug. 31, at 10am. On the Course Schedule, the Mastering column provides a reminder of these due dates (every Monday) and the listed number indicates the points that each assignment is worth.

It is your responsibility to finish the homework before each closes. Keep in mind that computer/internet issues can arise, so it is in your best interest to plan ahead and complete them early. For Excused Absences that extend beyond the open period, refer to the Excused Absences section below.

Lab Assignments

Pre-Lab: For most weeks of lab, there will be a pre-lab assignment in MasteringBiology for you to complete. These assignments, along with any posted background material, are intended to help prepare you for the week's laboratory activities. These assignments open the Friday before the lab week, are available all week, and are due Friday at midnight. Example – your first 'real' week of lab is actually the second week of the semester. That week's pre-lab assignment (LabWk2 Ecology) will open at noon on Friday, Aug. 28th, and is due Fri, Sept 4, at midnight.

Lab Work: Each week will have slightly different requirements. Details will be provided in the files posted to BbLearn for each lab. Work is turned in as a packet uploaded to BbLearn/LabInfo/TurnItIn. These packets (and instructional videos) will be available at the same time as the lab Mastering assignments, and are due at the same time, as well (Fridays at midnight). Points on the lab packets are earned through a combination of completion of the assignment (not leaving blanks) and correct answers.

Lab Reports: You will write formal lab reports during the semester. Further information will be provided in lab.

Lab Exams: During midterms and at the end of the semester, there will be a cumulative exam over the lab activities, taken on BbLearn. You will be expected to answer questions related to the completed labs.

Late Assignments: lab work will be docked **10%** for each 24 hour period after your normal lab. *Failure to promptly communicate completion issues with your TA will result in a 10% penalty on any makeup work for each day of non-communication.*

You should keep a 1.5 or 2-inch binder and electronic file folder just for lab materials – i.e., your lab packets and notes taken during lab. If you keep everything organized throughout the semester, you will have a useful guidebook from which to study for exams or to refer to in the future. **Keep every item** for the entire semester;

this is useful for studying as well as insurance against work that somehow goes ‘missing’ during electronic submission.

EXCUSED ABSENCES

Only students with major medical/family issues or written official university excuses will be allowed accommodation. Accommodation may take the form of make-up work or dropping an assignment from the student’s grade. Makeup work may differ from the original assignment. *Final acceptance of accommodation is at the discretion of the instructor.* Arrangements must be made at least **one week prior** to your absence in the case of known schedule conflicts (ex: participation in official university sporting events, course field trips, etc...). In the case of an emergency/non-scheduled absence (major medical/family issues), accommodation must be requested immediately following the absence (don’t expect to be granted make-up work if a month goes by between the emergency and your request). It is the student’s responsibility to document the extent of their issue and **promptly** make a **written/emailed** request for accommodation.

GRADE DISPUTES:

If you feel that an assignment has been graded incorrectly, you have **one week** after receiving the graded assignment to dispute your score. You must return the assignment to your instructor or TA, along with a written request for re-grading that includes a description of the dispute. Final grade assignment is at the discretion of the instructor or TA.

COMMUNICATION:

Spelling, grammar, punctuation, logic and legible handwriting are critical elements of communication. You may lose points on quizzes, exams and/or lab assignments for misspelling, poor grammar or syntax, improper punctuation, flawed logic or illegible handwriting.

ACADEMIC HONESTY:

Refer to Article II of the UI Student Code of Conduct (<http://www.uidaho.edu/DOS/judicialaffairs/studentcodeofconduct/articleii>). Plagiarism or academic dishonesty will not be tolerated in any form. Offenses will lead to an F on the assignment or in the class, letters to your Department Chair and College Dean, and a formal complaint filed with the Dean of Students. Be aware that even one incident of academic dishonesty may result in expulsion from the university.

CLASSROOM BEHAVIOR

The following behaviors are rude to the instructor and fellow students, and are considered unacceptable behavior for class and lab: ringing cell phones, use of cell phones for talking or texting, web surfing, sleeping, reading extraneous material, chatting with neighbors, etc... The instructor or TA reserves the right to dismiss students from class (with appropriate grade deduction for missed assignments) that display any of these behaviors. Repeated violations may result in an F on that day’s quiz/exam/lab homework, an F in the course, and/or removal from the course.

University of Idaho Classroom Learning Civility Clause

In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning. Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (885-6757), the UI Counseling & Testing Center's confidential services (885-6716), or the UI Office of Human Rights, Access & Inclusion (885-4285).

ACADEMIC SUPPORT; TUTORING & COLLEGE SUCCESS

TCS offers three distinct services dedicated to student success: tutoring, SI-PASS, and Academic Coaching. Vandal Tutoring provides drop-in style tutoring in person at the Library or online through uidaho.edu/tutoringonline at no cost to undergraduates. SI-PASS provides peer assisted study sessions for difficult courses. You can find the schedule of currently supported courses at uidaho.edu/si. Academic Coaching offers students an opportunity to work with a coach, one on one, to improve their academic skills such as: effective studying, test taking, time management, and note taking. Visit uidaho.edu/academic-coaching to schedule an appointment.

Center for Disability Access & Resources

Students with disabilities needing accommodations to fully participate in this class should contact Center for Disability Access and Resources (CDAR). All accommodations must be approved through CDAR prior to being implemented. To learn more about the accommodation process, visit CDAR's website at www.uidaho.edu/cdar or call 208-885-6307.

Please notify the instructor during Week One of classes if accommodations are required.

FIREARMS POLICY

"The University of Idaho bans firearms from its property with only limited exceptions. One exception applies to persons who hold a valid Idaho enhanced concealed carry license, provided those firearms remain concealed at all times. If an enhanced concealed carry license holder's firearm is displayed, other than in necessary self-defense, it is a violation of University policy. Please contact local law enforcement (call 911) to report firearms on University property."

Biol 114 Fall 2020 Schedule

WK	DATE	LECTURE TOPIC	CHAPTER	MASTERING [^]	LAB
	24-Aug	Syllabus			
1	26-Aug	Science: a Process	1.1&1.6		Syllabus & Safety
	28-Aug	Ecology: abiotic factors	1.3, 49.2&.3, 53.1&.2		
2	31-Aug	Ecology: biotic factors	51.3&.4, 52.1&.3	14.5	Ecology
	2-Sep	Ecology: cont.			
	4-Sep	Evolution: definition & evidence	1.4, 22.1-3, 25.2		
3	7-Sep	NO CLASS - LABOR DAY		11	Selection
	9-Sep	Evolution: Selection modes	23.3		
	11-Sep	Evolution: Selection types	23.3, 22.5		
4	14-Sep	Case Study 1 - Sneaky Salmon		11.5	Scientific Writing 101
	16-Sep	Evolution: Other Mechanisms	23.4-6		
	18-Sep	Review			
5	21-Sep	Exam 1		21.5	Phylogenetic Trees
	23-Sep	Speciation & Trees	24.1, 25.1		
	25-Sep	Macroevolution	24.4, 25.1		
6	28-Sep	Patterns of Life	25.3&.4	15	Microscopes 101
	30-Sep	Cells and the Cell Theory	1.2, 7.1&.2		
	2-Oct	Life as a prokaryote	7.1, 26		
7	5-Oct	Prok. importance & diversity	26	20.5	Pond Life I
	7-Oct	Case Study 2 - arsenic controversy			
	9-Oct	Eukaryotic evolution	27		
8	12-Oct	Protist importance & diversity	27	10	Pond Life II & Midterm Practical
	14-Oct	Review			
	16-Oct	Exam 2			
9	19-Oct	Transition to Land I	28.4&.3	9.5	Plants I
	21-Oct	Transition to Land II	28.3		
	23-Oct	Plant importance & diversity			
10	26-Oct	Case Study 3 - pollination		11.5	Plants II
	28-Oct	Plants are cool, too			
	30-Oct	Fungal evolution	29		
11	2-Nov			10	Fungi
	4-Nov	Fungi importance & diversity			
	6-Nov	Review			
12	9-Nov	Exam 3		18	Comparative Anatomy
	11-Nov	Animals & development	30-.2		
	13-Nov	Evolutionary themes	30.3		
13	16-Nov	Protostomes v Deuterostomes	31, 32-.3	8	Phyla diversity
	18-Nov	Vert. innovations, up to tetrapods	32.4&.5		
	20-Nov	Vert. innovations, tetrapods+	32.5		
	23-Nov	Thanksgiving Break			
14	30-Nov	Case Study 4 - arms race		25	No lab - review for LabFinal
	2-Dec	Review			
	4-Dec	Exam 4			
15	7-Dec	Viruses	36	14	LabFinal
	9-Dec	Scavenger Hunt			
	11-Dec	Conclusion/Review			
16	16-Dec	Final Exam, 10:15-12:15am			

[^] Mastering assignment due on the date for this row, number in cell is the points the assignment is worth