Fall 2020 Biology 1108 – Principles of Biology II (Online)

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Class Information: Most classes will be asynchronous online, but one day per week we will have a SYNCHRONOUS Zoom class during your assigned class time. *Schedule below but subject to change. (The Face-to-Face part of this course will be the required lab.)

Time: 9:10 - 10:00, 11:30 – 12:20 or 1:50 – 2:40
(This adheres to the modified class times for this semester)
Location: The comfy chair of your choice!

Instructors: **Dr. Carrie Pucko (Parr)**
cpucko@uga.edu (DO NOT email through eLC)
3514 Miller Plant Sciences Building
Office Hours: I will be holding virtual office hours Mondays and Wednesdays and Fridays from 11:30 – 2:30 on Zoom UNLESS WE HAVE SYNCHRONOUS CLASS THAT DAY (The Meeting ID is always the same: **2020 1108 01**)
If necessary, *other times by appointment* (email me to set up a time)

Unit Exams: These will be synchronous online on 3 Tuesdays (9/22, 10/20 & 11/17) from 7 – 8:30 pm
Unit 4 Exam: 12/16: 7-10pm (Individual and Group) Synchronous Online
Unit Retake Exams: Retakes will be open during finals week. Times TBD

Aims:

This course primarily strives to get you to "think like a scientist" by considering not just what we know, but how we know it. We will be learning how to analyze information found in popular media, peer-reviewed literature, statistics and in graphs. The skills and thought processes we will cultivate together can then be applied to other scientific pursuits, but hopefully can also be applied in many other parts of your lives.

In 1108 we will focus on some of the big, organizing principles of organismal biology by:

1) Understanding how evolution drives biodiversity and how we can understand relationships between species in evolutionary terms.
2) Investigate the major evolutionary milestones that have led to the wide range of organisms we have on Earth today.
3) Consider how interactions between organisms and their biotic and abiotic environments have shaped their evolutionary trajectories.

To be successful in this pursuit, we will build on knowledge you gained in BIOL 1107 and learn how to apply those concepts in new and (hopefully) exciting ways. Obviously, we will only be able to cover a tiny portion of organismal biology, so think about this course as a place where you can develop your analytical and critical thinking skills while learning more about what types of biology interest you most. Let this be your jumping off point!

In many ways, this course will feel different than other biology courses you have taken. Our focus is on **applying knowledge** and understanding interconnections between topics. That means you will be asked to think in complex ways about process, patterns and concepts instead of memorizing facts (though some of that is inevitably necessary).

I acknowledge that this is a hard thing to do. You get better at critical thinking only through practice, something that many people haven't often been asked to do in high school or even in college. It can be frustrating, and may require you to find new ways of studying or participating in class, but if you put in the effort, it will make you a better scientist, doctor, and/or citizen.

Challenges and Considerations with Online Learning

Obviously having this class online is not exactly ideal and comes with a unique set of challenges. We got a taste of this last year, so we know a little bit of what to expect. I am going to do everything I can to turn these challenges into opportunities and find ways to make this semester as engaging and rich as possible.

With that in mind, just because this course is online does not mean that we won't be interacting. Only a portion of this course will be taught asynchronously. **You will still be required to participate in class through synchronous Zoom classes held during your normal class time**. These synchronous classes will be held once per week (although the exact day may change based on the content schedule) You can expect to see material from these synchronous, interactive Zoom sessions on the exams. When you are reviewing the PowerPoints or watching assigned videos, we strongly recommend that you take notes by hand, as the act of physically writing helps you engage with the material and improves learning. Passively watching recorded sessions or videos is NOT a good way to learn the material. Re-writing or typing your notes is also a good study strategy, as it will help you think through and organize what you have learned.

Important Habits:

1) **Stay organized**. Make and continuously update a calendar for yourself. Don't rely exclusively on the digital eLC ones. Block out time to complete coursework for online classes each week.
2) **Communicate.** Are you having a problem or are you struggling with something? Don't wait to reach out. The more communicative you are, the more we can do to get you on track. If I only find out about your broken laptop after you've missed 5 weeks of material, our options are a lot more limited.
3) **Control your environment.** Have a place you can watch videos and do work where you can focus. Do not try to multitask when watching videos. Take written notes and rewind if you miss something (this is actually an advantage of video lectures I think).

Learning Resources:

"Lectures" and "Lecture" Videos

Through "lectures" you will be exposed to new material and be expected to interact with it through thought questions, group activities, graded questions and projects. Passively listening to lectures

won't be enough. You learn better by discussing, debating and solving problems with your peers. This is not easy these days, so I **highly** encourage you to organize online study groups and/or attend virtual office hours regularly. Memorizing slides will get you about 75% of the way in this class. After that, you need to use your brain to think about the implications and applications of concepts.

Asynchronous Online Class Days:

For asynchronous classes, materials will all be provided online and due dates will be clearly indicated. (All materials will be organized by day in eLC content folders)

While there will be variation in the types of videos and questions each week, these asynchronous classes will include video lectures with ungraded questions interspersed in the videos themselves and a few graded questions to be completed in eLC after each video. Passively listening to lectures won't be enough. Be sure to take notes, jot down questions and talk to someone else about the concepts when you can.

Graded questions that correspond to these classes will be in an eLC quiz with the due dates clearly indicated.

Synchronous Online Class Days

Once per week (though the exact day may change) we will hold a synchronous Zoom class where we will discuss difficult concepts, work in small groups on problem sets and do some interactive activities.

Please make sure you have access to a computer with video and audio capabilities for these classes. (Let me know ASAP if you need help getting access to one). Also, make sure you test Zoom and know at least how to turn your audio and video on and off. Directions for how to sigh into these Zoom classes will be communicated on eLC.

eLC: This is my primary way to distribute information. I often post announcements with important course info. Check eLC frequently and **BEFORE** you email me with a question, in case I've already answered it. (I often don't answer questions already answered in announcements or in the syllabus.) This is also where you'll find readings, assignments, quizzes and links.
*I recommend you set your eLC preferences to text you with updates if you think you'll forget to check the website regularly.

Textbook: OpenStax Biology is a free online textbook that will serve as your **secondary resource** and for reinforcement. There will not often be required readings, but you should view this as a place to reinforce the material we cover in class. A .pdf version can also be downloaded here: OpenStax Biology Textbook. If you prefer to get a print copy, they can be found on Amazon.com. I do NOT recommending reading this "cover to cover". There is a lot we won't cover and I will provide alternative resources when helpful.

SimBio: We will be using SimBio online labs to help reinforce and apply lecture material to new systems. You will need to sign up for this service online (details are provided on eLC). The labs you will use will cost $34 for the semester.

Peer Learning Assistants (PLAs): Some sections have PLAs to help during in-class activities. Please use these friendly, knowledgeable people as a way to get a deeper understanding of material and find new ways of interpreting information.

Office Hours: These are times I have committed to being available in my office for students to stop by with questions. A good strategy is to jot down questions during lecture or as you're reviewing. No need for an appointment. Make it a habit to come early and often if you're having trouble. It's also something I consider when I'm asked to write a recommendation letter.

eLC and UGA Email Picture: Please update both modes of communication with a picture so that I can link an email to a face. This will also help you if/when you ever need a recommendation letter. It makes such a difference. Doing this by next Friday (8/28) will earn you 2 bonus points. See tutorial in eLC for instructions on how to do this.

Assessment:

Assignment	Notes	Points	% of Total Grade
Zoom Attendance	>90% will get 100% of attendance pts	25	2.5
Coursework / Worksheets	Given as a % of total points (Drop 1)	50	5
Video Lecture Quizzes	Points will vary by lecture	50	5
Group Project	1 project - 30 pts	30	3
SimBio Assignments	6 Online Labs (25 pts each) (Drop 1)	125	12.5
Review Quizzes (eLC)	Given as a % of total points (Drop 1)	120	12
Individual Exams	4 x 125 pts (Retakes for Units 1-3 will still happen)	500	50
Group Problem Sets	4 x 25 pts (Drop 1)	100	10

Video Lecture Quizzes and Questions: These will be used in almost every class to: 1) Review 2) Let me know how well I'm presenting information 3) Let you gauge your understanding . There are 2 types of questions you'll encounter. In the videos themselves, you'll be prompted to answer questions. Your accuracy on these in-video questions will not be part of your grade, but we will talk about the answers to tricky questions. They are made to help you evaluate your own understanding and can also be a good resource for you when studying for an exam. After each video there will also be 1-4 graded comprehension questions. These will contribute to your "Video Lecture Quiz" grade.

Coursework: This grading unit can cover all kinds of assignments. In non-COVID times, we do periodic worksheets in class or listen to podcasts or draw concept maps. All of these will be coursework assignments and they will have different methods of submission. Sometimes you will complete group activities on Friday that will also count for this category.

SimBio Labs: SimBio labs are required and will be done outside of class. You may work with your classmates on these labs, but each student *must* submit their own final answers to receive individual grades. Each assignment will be assessed with 20 points from graded questions while the other 5 will be apportioned based on the % of non-graded questions you answered. Labs submitted late will lose 20% and no credit will be given after 3 days.

Review Quizzes: Weekly review quizzes will be due most Mondays and will cover the material that was presented the previous week. Use these to look over your notes and review key concepts and to understand how the material fits together. They will require you to think and apply concepts, not necessarily just locate the information in your notes. You will be awarded the percentage of 120 points that you earned throughout the quarter. For each quiz, you'll are allowed 2 attempts. Your score for that quiz will be the average of the two attempts.

Late work: Late assignments will generally not be accepted unless you have asked for and received permission from me ***via email*** ahead of time. (See SimBio info for exception)

Exams: Three unit exams will be given on Tuesday evenings from 7-9pm. This will be the time set aside for the individual portion of each exam. Details about those exams will be forthcoming. The 4th unit will be given during our mass exam final slot***. There will be the option to retake the unit 1, 2 and /or 3 exams during finals week.*** Please see the "Exam Info" document in eLC for all the info and explanations about dropped group tests. If you have a documented conflict (job, child care), family emergency or illness for an exam, please contact me ASAP to set up an alternative testing time. If an alternative time can be set up within 3 days, you'll take the exam mid-semester, otherwise, we will use the score on a retake exam as your unit exam score.

Appeals process: If you feel that there has been a mistake made in your grade on an exam or another assignment, you need to submit a **written** regrade request within **two weeks** of the exams being made available. Regrade requests must be made via email. Exams can be reviewed in Biological Sciences Bldg. room 403B. (Schedule will be posted on eLC)

Time Expectations: A 3-credit course should require about 6 hours/wk outside of class. Without a textbook, most of this time will be spent looking over notes, on quizzes and on Simbio. Because this course is online, expect 9 hours per week (which will include watching lecture videos and completing lecture quizzes). I'll check in periodically to see whether we're meeting that target.

Final Course Grade*

Grade	% Points	Total Points	Grade	% Points	Total Points
A	93 – 100%	930 – 1000	C+	77 – 80 %	770 - 799
A-	90 – 93%	900 – 929	C	73 – 77 %	730 – 769
B+	87 – 90 %	870 – 899	C-	70 – 73 %	700 – 729
B	83 – 87 %	830 – 869	D	60 – 70%	600 – 699
B-	80 – 83%	800 – 829	F	< 60 %	< 600

*** Preliminary (There is not generally a curve but would only ever be curved up)**

Email and Etiquette

Please include an introduction and salutation in your emails. It lets me know how to address you. Also, I am expecting you to attempt to answer questions you have first. Therefore, I am unlikely to answer questions that are answered in the syllabus or in eLC announcements. Check first.

Please check your technology early. I can't do much for you if you run into a last minute problem.

Email Rules:

1) Content questions (questions about the material itself) will all be handled in office hours. This really is the better way to do it anyway since it's so much easier to gauge understanding when we can converse and diagnose where the gaps in understanding or misunderstandings are.

2) Questions about technology. Give it a couple hours and try again. If it still doesn't work, you can email me about it. I'm just trying to avoid the emails about problems that end up being caused by a slow server that eventually just fix themselves. That also implies that you need to begin working on online assignments well in advance in case technological trouble slows you down. Stay organized, plan ahead and stay calm. If there's an unavoidable problem that costs you points, we can fix it.

3) PLEASE USE OFFICE HOURS! This is a great way to get questions answered, or just to talk to someone! Stop in and say hi and let me know what you're up to if you don't have questions. Sometimes you'll even get to say "hi" to Ziggy or Neptune.

Lastly, be courteous and respectful. You never know what kind of day someone has had, so take a moment to be kind and polite to our support staff, your peers and your teachers. We are all better off when we give each other the benefit of the doubt and a smile.

Group Work:

Group work is designed to help you engage with the material through discussion and by teaching each other since people learn in different ways and all have unique perspective that could be valuable to share. Your group members are also a great resource to turn to when you have questions or you missed class and need catching up. I encourage you to work together on homework and quizzes, but each person must hand in their own work unless explicitly told otherwise.

Working together vs. Cheating

Most of you know this, but I find it necessary to outline acceptable practices using online quizzes and working in groups. It is a product of our times that you have access to quizzes online and can immediately communicate with 500 other people in your class at any given moment. There is the temptation with this kind of access to share answers to quizzes or exams or any other assignment. over social media. This is never OK and is a violation of the Academic Honesty Agreement. However, I acknowledge there is a tension because working in groups on a quiz is something I encourage and is beneficial to your learning. So I'd like make it clear, in case it wasn't, the line between the two.

Encouraged Behavior: Working on something with someone else face to face (Zoom or socially distant or a roommate), discussing answers to questions based on notes or required readings and then ultimately deciding and entering which answer you think is correct. This involves learning and teaching and communicating arguments or explaining a thought process. These are all good things. These enhance understanding.

Unacceptable Behavior: Sharing answers over social media or giving answers to someone so that they themselves do not have to complete the reading or don't have to think about the answers. This does not require beneficiaries to think or internalize information. Using or soliciting answers to

questions posted on social media to avoid completing required work. It is a shortcut to doing less work and it is academically dishonest.

Academic Honesty:

All academic work must meet the standards contained in "A Culture of Honesty" (**http://www.uga.edu/honesty/ahpd/culture_honesty.htm**) You are responsible for informing yourself about those standards before performing any academic work. Students who cheat (e.g. look at, or copy from exams, letting others copy, hand in work that is not their own) will be reported to the Office of the Vice president for disciplinary action, and are subject to severe disciplinary penalties including the possible failure of the course and/or dismissal from the University. Policies regarding academic dishonesty will be strictly enforced. If in doubt, ask your instructors or contact Debbie Bell.

Accommodations for students with Disabilities:

Students with access challenges or disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact me sooner rather than later. This applies to in-class and testing accommodations and even financial hardships. COVID-related accommodations should go through the DRC as well.

Lab:

The labs for BIOL 1108 are pretty separate from lecture. I can not often answer lab questions. Instead, direct those to the Lab Coordinator Kim Brown or your laboratory GTA.

Participation in BIOL 1108 requires concurrent enrollment in lab (BIOL 1108L). Students who aren't enrolled in lab (without permission from Biology Advising) will be automatically dropped from the course. If you ever need to drop one, you ***must*** do so directly through Biology Advising.

FAQ:

How much time should I be spending on this course?

> A good rule of thumb for any class is that you should spend (on average) two times the amount of in-class time out of class each week. Since there is no assigned reading for this class, most of that time will be spent on assignments or reviewing your notes. (This comes to ~9hrs /wk)

How do I do well in this course? (This is exactly what I will tell you if you ask me this question.)

> First, it's hard but you need to interact with the material and your classmates and try not to just write or type notes without thinking about what you're writing. Write down questions you have during lecture in the margins of your notebook and bring them to office hours! Take some time at the end of each week to go through your notes. Re-write them or highlight them. It may seem like it is a waste of time, but it will save you time studying for a test. Take your time on quizzes and assignments and keep on top of due dates. Lastly, ask questions. That means you should regularly get in the habit of attending virtual office hours. You should also learn where your resources are. You will get lots of practice questions through in-video questions, post-video quizzes, weekly review quizzes worksheets and group problem sets. Use these to design your own questions to study from.

What reading should I be doing?

There is rarely assigned reading in OpenStax. In general, I do not advise that you just read through OpenStax. If you missed a class, it might be a good idea to read up on the material you missed, but the best indication of the level of detail I expect you to know will come from lectures and powerpoints. Sometimes the extra details in OpenStax can muddle your thinking. To find out where that material might be, try searching for keywords. I'll often post videos and links in eLC when I find good resources too. Khan Academy is one of my favorite.

What do I do if I have a question?

If you have a question about course logistics or something just doesn't seem like it makes sense, your first check should be on eLC. You may also want to see if it's in the syllabus. In general, I won't answer emails that are clearly answered in one of these two places. Then, come to office hours! Far too few people come to office hours each semester and those that do, will definitely tell you it's helpful (and I'd love to meet you).

I missed class. What should I do?

Talk to a friend or neighbor in the class. It's likely that they will help you out by sharing their notes. If there was a worksheet, it will probably be posted on eLC soon, but you may not be able to hand it in for a grade (this is why we have a dropped HW assignment). You do NOT need to send me a reason for missing, a doctors note or information about a death in your family. You are adults and you can manage your absences so that necessary absences won't impact your grade. If you left a day early for spring break, missed a day for a dentist appointment and then slept in too late one day, that's fine, but you don't get additional absences later in the semester if you get sick and need to miss class. As far as your grade is concerned, all absences are created equal.

How should I study for a test?

Start with the lectures. Outline your notes and make sure you understand keywords and concepts. Draw yourself a concept map if that helps. Go over quiz questions and make sure you understand why the correct answer was correct, but more importantly, why the incorrect answers were wrong. Write your own questions using quiz answers. Study with a group. Being able to teach someone something means you know the material well. Quizlets and flashcards will get you about 70% of the way, but you need to do more than that if you want to do better than that.

I didn't do as well on the test as I'd like, what should I do?

Make sure you go look at your test! Maybe there was a certain topic that accounted for most of the missed questions. Then, come to office hours! Not just after a test, but also when you have questions or feel like something in lecture was confusing. Be proactive. If you wait until the afternoon before a test, there is a chance I won't be able to get to you. I will also be holding exam debriefs to go over exams.

Course Schedule: Put these important dates in your calendar

Week (Dates)	Topic	Due Dates and Notes (* Denotes Weekly Review Quiz Due Date)
8/21	Intro and Evolution	Sign up for Simbio and Zoom
8/24 – 8/28	Genetic Drift and Selection	Syllabus Quiz (W) Ferret Simbio (F)
8/28	ZOOM CLASS	
8/31* – 9/4	Hardy-Weinberg	
9/4	ZOOM CLASS	
9/7	NO CLASS – Labor Day	
9/9* – 9/11	Species and Speciation	Sickle Cell Simbio (F)
9/11	ZOOM CLASS	
9/14* – 9/18	Phylogeny	
9/18	ZOOM CLASS	
9/21	ZOOM CLASS	GROUP EXAM 1
9/22	Unit 1 Online Exam	7-9pm (Synchronous)
9/23 – 9/25	Early Life & Prokaryotes	
9/28* – 10/2	Microbial Milestones	Epidemiology Simbio (F)
9/28	ZOOM CLASS	
10/5* – 10/9	Plant Kingdom	
10/9	Instead of Zoom…	ON-CAMPUS FIELD TRIP!!!
10/12* – 10/16	Animal Evolution	6th Extinction HW (F)
10/16	ZOOM CLASS	
10/19	ZOOM CLASS	GROUP EXAM 2
10/20	Unit 2 Online Exam	7-9pm (Synchronous)
10/21 – 10/23	Climate Change Intro	Climate Change Simbio I (F)
10/26* – 10/28	Population Ecology	
10/26	ZOOM CLASS	
11/2* – 11/6	Community Ecology	Isle Royale Simbio (F)
11/6	ZOOM CLASS	
11/9* – 11/13	Human Impacts on Earth	Climate Change Simbio II (F)
11/13	ZOOM CLASS	Group Project Intro
11/16	ZOOM CLASS	GROUP EXAM 3
11/17	Unit 3 Online Exam	7-9pm (Synchronous)
11/18 – 11/20	Homeostasis & Glucoregulation	
11/23*	ZOOM CLASS	Individual Concept Map (M)

11/25 – 11/27	THANKSGIVING BREAK	
11/30 – 12/4	Reproductive Endocrinology	GROUP CONCEPT MAP (F)
11/30	ZOOM CLASS	
12/7* – 12/9	Nervous System	We have class M, T and W!!
12/9	ZOOM CLASS (Last Day of Class)	Action Potential Simbio (W)
12/16	Unit 4 Online Exam and GROUP EXAM 4	7-10 pm Synchronous
	Midterm Exam Retakes	12/14 – 12/17 Times Vary

***** Weekly Review Quizzes are due in eLC at 11:59 on these days