**Midterm Reflection:** *Let’s pause at midterm to get a sense of what you are learning*

*and what is supporting that process best for you. The questions below make this more of a self-reflection on your learning than a one-way communication with us. Cultivating this kind of metacognitive awareness will help you to articulate your learning processes, so that you start to own the skills you are developing. So please be thoughtful in your responses here.*

*1) What aspects of the course are helping you develop most? Please check all that apply and please also offer comments on why these are useful for your development.*



* It’s easier to follow along when I have the PowerPoints before class and the weekly quizzes help me stay on track with the material.
* The practices questions help me the most. For the first exam it was hard to predict what the questions were going to be like. I felt like I knew the material but did to have enough practice.
* The powerpoint are straight forward, I have not been able to access all of the writing on every powerpoint. That is the only issue I have.
* Dr. Van Cleve says a lot of key information verbally that aids in my understanding.
* The lecture slides really help as well as all the practice quizzes. I met with Dr. VanCleve to clarify challenging topics and that was also really helpful.
* The powerpoints are helpful, but sometimes not as helpful as they could be because not all of the information Dr. Van Cleef says in class is on the slides. This means that when there is a lot of information presented very quickly, I often can't write it all down in time, and since it is not written on the slides, then I simply miss that information. The recent slides dealing with population dynamics and equations are especially difficult because it seems like all there is on the slide is the equation or the derivation of it, but no practical explanation of what those equations mean written down. Dr. Van Cleef usually gives this explanation while lecturing but if I miss writing it down at that time, I can't go back and review it.
* It would also be helpful to have the explanation to the homework questions posted at some point before the exam so we can go through and understand why we missed what we missed, instead of just guessing on our own.
* I think that the lecture powerpoints are nice to have available before class if we want to get ahead on the material. However, I think it would be extremely helpful to have the the Echo360 recordings for class because somethings are hard to read in the handwriting on the slides and I am not able to hear in class at times so, I just miss that whole part of the lecture.
* I think the clicker questions and defining feature matrix quizzes have been the most beneficial due to the similarity in material presented on the exam. I feel as though it has been a good way of helping me understand the material better by taking a common/basic idea of ecology and applying it to a question that has a larger scope. I prefer those types of questions as they help me remember the information better than just knowing the definition of a word/concept.
* Honestly, I think the online quizzes are the only thing that help me out because they give us example questions that we are likely to encounter on the exam. We do not get any meaningful practice through other means.
* Lectures are only helpful in class because you can hear what is being said, but afterward, they do not help because half the words are too disorganized and messy to read/comprehend.
* The posting of the powerpoints after class allows me to focus more on listening during the lecture than trying to write down every little note. Although, I would really like if you used Echo360.

*2) Do you find the variety of things we do in* ***labs*** *helpful? Why?/why not? What do you wish we did more of and/or less of—and why?*

* I wish there were less out of class work as I do not feel it is contributing to my knowledge of ecology.
* Lab quizzes are helpful because I always know whats going on in lab beforehand by studying for the quizzes. I like that the worksheets are turned in as a group because we can discuss the answers.
* No. A lot of the lab work feels like busy work. The lab where we have to plan out own experiment is very repetitive. We have done labs like this is all classes freshman and sophomore year and I feel as thought we no longer need practice with this. Some of the quizzes and content is helpful with understanding lecture contents.
* Lab activities are helpful to drive home the more important concepts. I wish we did more outside work.
* I believe that the unpredictability of the lab is one of its best assets. the variety is refreshing to learning more difficult topics.
* Some of the labs are interesting. I really liked the crayfish and phenotypic plasticity labs, but other labs can feel unnecessary. For instance, the lab in which we designed our own experiment and then went to the arboretum felt redundant to the phenotypic plasticity lab.
* I find some aspects of lab more helpful than others. I enjoy the hands-on labs in which we perform actual experiments moreso than the conceptual labs, but I also think that the hands-on labs aren't necessarily as helpful because so much time is spent gathering data that there is very little time for data analysis and understanding how to run the statistical tests. I think that learning the stats and knowing how to run each test is extremely helpful knowledge.
* To an extent. I really don't know much about research in the field of ecology so I think it is important to see all areas of biology to determine the field I am interested in. I wish we did more hands on work and less writing and lab reports.
* I don't really enjoy the lab or see it as helpful. My TA is great and super helpful, but I feel like a lot of the activities are just busy work or repeats of what we have already learned in many of other classes. For example, there is really no need to go through and try to teach us how to develop hypotheses-most students have already learned how to do this.
* A majority of our labs are sitting in the room doing statistical tests on Excel, which isn't very interesting and also not very applicable-most of us will not need to know how to do such tests, and we lack the biostats background to understand the more complicated things.
* I find the lab helpful but all of the computer statistical tests are not teaching me much.
* In the sense of lecture, I do not find it helpful; however, viewing ecology as a whole, it's very helpful. Going out to observe nature first hand really enforces that material in a real world aspect.
* I think lab is helpful because it applies what we learn in class to actual situations and it makes the material more interesting.
* sometimes the lab material does not correlate with lecture. I would find it more beneficial to know more background information from lecture before doing labs.
* I find lab more stressful than helpful. I also believe that there should be a bench mark or TA curve of TA grade adjustments to make sure each TA is grading equally so as not to give one section a grade advantage over the other. I also find the work to be tedious in the lab with little connection to the lecture.
* The labs are helpful with the concepts, but a lot of time is used figuring out how to use the computer programs instead of understanding the concepts and statistics.
* I do find the majority of what we do in lab helpful. It has been nice to get extra work and help using Excel because it is something I don't have much experience with, but I also feel we do not need to be using as much excel and other computer programs as we do. It is nice to look at graphs that apply to the topic and make those connections, but sometimes I feel like I'm stuck in a computer class.
* Yes, it helps with learning the material. In addition, it's not boring so I actually want to pay attention to what is happening.
* I think it is helpful to see different aspects of ecology. The outdoor labs have not been great thus far, it has been too cold to get anything productive done or even to care about those labs. I don't think that the amount of work that we do within or outside those three lab hours is reflective in the amount of credit we get for it.
* I feel like the lab is all over the place. I also don't like the presentation at the end of the semester and all of the small assignments with that. It's hard to keep track of the quizzes, assignments, and presentation.
* I wish we did less excel statistics. I understand there is a purpose as this is how we quantitate our results, but its boring to just sit there on your computer during a lab.
* I think the labs are fair and goes with the concept taught in the lecture. I also like how the labs have variation and helps us boost our analysis in datas.
* As a senior, I don't find the labs particularly useful because it doesn't really add much to the lectures besides the general topics. However, it does provide useful examples of the things we learned in lecture. And after 4 years of college, I finally understand statistical analyses. So thank you, Ecology.
* I do wish we did more lab experiments at EREC and did more field work in general. In my experience, I have found that learning about nature is most efficient when in nature rather than the lab.
* Yes. I feel like we learn a lot of different skills and learn about a lot of different topics. I wish we did more hands on activities, and less long worksheets and reports. As biology/general science students we end up writing so many reports over the course of 4 years in basically every class, but this class is unique because of the outdoor component, so I feel like focusing more on that would be a better use of time.

*3) Learning experts often talk about the necessary “difficulty” and “disorientation” that is part of learning. Can you share about what has been most challenging for you so far in this course? (Disorienting even?) What have you learned from this difficulty? What helped you in overcoming the challenge(s)?*

* The most challenging aspect for me is trying to get interested in the material and pay attention in class when much of it seems a review from previous classes. I have over come this by making myself retake notes every weekend to make sure I am getting all the material down and not skimming over anything.
* I have found it difficult trying to study for this class. There's a lot of material and I don't feel like I get much from the PowerPoint slides. I have learned that I need to take really good notes during class to study later.
* The most challenging thing for me is paying attention in lecture, I have a hard time focusing. I also have a hard time applying my knowledge to word problems and scenarios. I have learned that I need to practice applying the content rather than just memorization. The practice problems have helped me most with this issue.
* I do not enjoy the way lectures are taught. they are very monotone and not interactive. Lot of the material is organized in a way that it is difficult to determine what is on the test and what isn't.
* Many of the "derivative-like" equation discussed in lecture can be disorienting, especially when reviewing the lecture notes. Once the variables are clearly outlined they become less abstract.
* So far, the most challenging part of this course has been figuring out how to study for the exams, since there was no practice exam. From this, I learned how to expand my studying process to account for the many possibilities. Reading the textbook and understanding every slide of the powerpoints from lecture, as well as going over all weekly quizzes and clicker questions, helped me to figure out how to study for the exams.
* I am not the greatest at studying and get distracted often. Sometimes I don't even study. Staying focused is a big thing for me and quizzing myself over the material so that I will remember it.
* I really don't know a lot about ecology so balancing that with other courses has been the biggest challenge. It is hard to pay attention in class when we go over things I am less interested in. And when I do zone out I can't watch an echo or anything.
* The last several lectures with all of the math, equations, etc about population dynamics have been challenging. I still don't have a good grasp on these concepts, and I'm not sure how much of the background equations I need to know. It would be more helpful if all of this was explained conceptually instead of mathematically-the equation tells me nothing and I don't understand how to apply it to the ecological concept. I will have to use some online sources and try to get a better grasp on these topics.
* I wouldn't say anything is disorienting, which I think is good, but I do think the difficultly has been fair. I don't think anything has been unfairly/impossibly difficult. The more recent modeling concepts are a bit challenging because it is a new way to think about population dynamics and interactions. I think looking at graphs of the models and manipulating the parameters helps to understand how each parameter affects the population growth.
* The most challenging has been staying focused during lectures for the full hour and fifteen minutes. I overcome this challenge by mentally breaking the class into smaller sections. Such as it's five 15 minute sessions compared to one 75 minute session
* I have difficulty reviewing the material before exams. Handwriting on the powerpoint slides are hard to read.
* I do not think I have experienced any material that has been too difficult to understand, but something that I do find difficult is staying interested in the class. One thing I have taken away from the class is that sometimes learning something you do not like is a part of life and it may help later on in a way you do not expect.
* I think the most challenging thing about the course is learning how to relate it to my own personal interests. I will be going to medical school next year and I feel as though much of the content doesn't pertain to me. I have tried to relate the content to medicine in some way but that doesn't always work.
* The most challenging part for me has been the process of data analysis from my own thinking and not being told what to do. The statistical flow-chart was very difficult to understand at first and I was often confused what to do with the data once it was obtained and what each test or graph meant. However, it is starting to click a little and the type of statistical analyses with different data sets is becoming easier and I can see the connection.
* Some of the graphs that we are given in the clicker questions are difficult/disorienting. Most of the time I give it my best quick guess in class and then return to those questions when I am studying to better understand the question and the graph itself.
* The explanations in class after answering the question are helpful but it would be more helpful if there was an Echo360.
* I have learned that I am still bad at math. I also learned that ecology is more difficult for me to understand because everything else I have learned is based solely on human anatomy and biology, so this is different.
* It has been challenging to go over all the material before exams because I could not decide how to organize everything. I tried to overcome it by organizing notes taken in class better but it has still been difficult.

 *4) Do you feel connected to the course material? Does it connect to your life or other coursework? How so? And how does this help your learning in this course?*

* No, I do not feel connected to the material. Majority of the material is all new and does not relate to any other biology classes that I have taken.
* I do not feel connected tot he course material. This information is not really relevant to my future career goals. I don't see myself using this knowledge in the future. This makes it hard for me to focus and learn the content.
* I do feel connected to the course material, since we are part of ecology. I saw connections to biology, genetics, physics, chemistry, and even calculus. It shows that this course is very much interconnected with the other sciences and that I can use knowledge from other courses to problem-solve.
* I'm doing my best to feel connected to the course material.  I connected with the material about climate change, but I often forget the specific animal examples that are discussed in class.  I find that the more relatable the material, the better I will remember it.
* I don't feel very connected to the current modules on modeling population growths and rates, because it seems very sterile and dry and doesn't connect to any of my other coursework. Other things have been more relevant to me and to my classes, such as the information on evolution, biomes, life histories, and social behaviors. I find these more interesting, which helps me to learn the material more easily.
* I don't feel very connected to this material at all. I understand its importance for science, and I appreciate the necessity of knowing this information when thinking about issues caused by climate change and habitat destruction, for example. But I will be starting medical school in the fall, and it just seems really unnecessary for me to be measuring the lengths of tree branches or picking leaves from plants. I have more of a problem with the lab than the lecture, because of how much busy work it involves and the fact that many of the activities are useless to my career in medicine.
* I think this course is very interesting because it teaches me why certain things around me happen and how they relate to the Earths' health. A lot of the information is truly shocking.
* I feel a connection to this course with my other biology courses, but I wouldn`t say I feel a connection to it with my life. Having this class connect with my other biology courses allows me to ease into the topics more smoothly and successfully, overall improving my learning experience.
* I feel connected in the sense that I am part of the environment we study, making it more interesting to learn about the impacts we make
* No, I do not feel connected to course material. It does not connect to my life or other coursework. I feel as it is a bunch of random information being thrown at me. It does not help my learning in the course. I wish it was better organized into large sections.
* The material is very connected to a lot of bio classes previously taken which helps my understanding of it. It helps me learn by making connections with other classes to deepen my understanding.
* Honestly, I do not really feel that connected to the course that much. However, I do realize that ecology is an important part of life, but I just feel as though the application of ecology will not be used in my future career. This disconnect has been a deterrent for me learning the material in the proper way, but I am trying my best to stick with it.
* I feel the lab and lecture material do not always connect. Sometimes I feel like I am in two different classes. But overall, I enjoy the course material. I feel connected to it because it applies to my interests and beliefs as well as other previous courses. For example, it is a recap for a lot of the things I learned in Evolution, Genetics, and Gen. Bio so I do like that the material weaves in and out of other courses' material.
* This coursework reinforces concepts I learned in evolution and other lower-level biology classes which is helpful for reminding me of some concepts that I have forgotten over the years. Being able to relate evolution and this course together has helped me better understand the old and the new concepts.
* Yes, I think the course helps us understand the basic information a biology students especially needs to understand. Understanding the evolution and changes and effects of our environment is essential to every human being.
* The course material can definitely be used in day to day activities and I have caught myself thinking back to ecology at different times. This makes me be more interested in the topic and therefore more engaged.
* The course material connects to my research, as my focus is in mammalogy. Having worked in the field, I see ecology in action wherever I go. Because of my connection to the course material, I can more easily see the connections between course topics and how they realistically play out in the physical world.
* I'm not really an outdoorsy, nature-loving kind of person, so I don't think I would ever really connect to the course material. But that's just me, I think people who like that kind of thing probably find the course material connects to their lives more. I do think the examples of organisms and the videos in class are cool (sometimes gross, but still very cool).
* I feel somewhat connected to the material, I think the lab helps with that. I can see how ecology is important to my everyday life. It kind of connects to previous coursework I have had, like evolution and genetics. This helps me learn because I have seen some of the material making it easier to learn the new stuff.

*5) Do you feel at ease in and stimulated by the learning community?*

* I am at ease but not always stimulated in lecture.
* I am not really stimulated by the learning community especially since class participation is not high. Mainly because this course does not apply to my future and I struggling to learn about things that are not relevant. I feel as though my lab coordinator tries her best to make it fun and not waste our time.
* I feel somewhat stimulated. some of the lectures questions do not test my knowledge and the questions on the test are very different than the lecture.
* Both lab and lecture are both comfortable and positive learning environments.
* Yes; I enjoy classes and learning, and being among like-minded individuals is comforting.
* School always stresses me out, so I am never really at ease. But, ecology has been going decently for me.
* Yes, I do enjoy the people in my lab and feel like I can ask any of my partners for help in the course. I also feel very open to asking my TA and professor for help.
* I don't have much to say about this. I know that the TAs that I have had, Luc and Jacqueline are really helpful in lab, which I really appreciate.
* I'd say that I feel at ease, but I would not say I've been stimulated too much by the course and its material. For me, the material is just not interesting enough for me to get that feeling I had during BIO 350 or BIO 304.
* For the most part, yes - I feel like the class makes it pretty easy to ask questions and to understand the content.
* Yes, Dr. Van Cleve and all of the TAs in the labs are very welcoming to questions and helpful in learning the material.
* Yes. I love Jackie the TA.
* Dr. Van Cleve and my lab TA, Luc Dunoyer, have been very kind, approachable, and always open to help. They are very positive instructors and truly care more about the students' understanding than a grade. They've been very helpful and welcoming to me and my frequent questions.

*6) What are we doing that supports your learning most? What can we do better?*

* It would help to have the lectures put up on echo so when I miss something that is said and not written down I can go back and make sure I have it in my notes to study for tests. I also learn best from practice questions and materials, so having access to clicker questions on reef (They all say hidden by instructor) and practice tests would help me prepare for exams much better.
* Weekly quizzes are the most helpful. I wish that the lecture was more interactive and that we had echo recordings. I usually go back and re-watch the lectures when I miss something or didn't take that good of notes and echo recordings would be very helpful. I also wish we had practice exams so I could get a better sense of how the actual exams will be.
* I wish the powerpoint were more clear and that we received a study guide and or practice exam so we knew more of what to expect! I was kind of surprised when I took the first exam.
* The TAs have been extremely helpful in fostering understanding of the course content; I think this has significantly supported my learning in this class.
* Keep asking the reef questions and weekly quizzes because those help me learn the material. More available questions for would nice for practice.
* I think some things to improve for the rest of the semester would be mainly in lecture: it would be helpful to have Echo recordings of each class meeting so that we can go back to explanations we missed writing down later and study. It would also be helpful to have more sample questions (explanations) available before the exam, especially with the latest material (equations, population dynamics, etc) which is more difficult.
* Just posting the lectures is something that helps me immensely. It allows me to review and understand things that I may not have picked up on when first explained. I`d say for something that can be done better is to maybe incorporate the book a little if there are aspects of it that you may think help the students out.
* The quizzes are nice to benchmark learning. The powerpoints are my main form of reviewing the material so I think that helps my learning the most, in addition to lecture. Some powerpoint slides can be a bit lacking in detail. Usually the slides are annotated but when annotations are lacking additional typed notes on the slides would be nice.
* The professors and mentors being open to meeting and talking about material supports my learning the most. It would be better to do class activities in small groups to really grasp ecological material.
* Having echos available would help a lot with studying to be able to watched things explained again while I am studying.
* I think the quizzes and questions are great ways that have supported my learning. It forces me to engage with the material, which is something I need for a course like this in which I struggle to feel attached to. One thing that could be beneficial is uploading recordings of lecture just in case I miss class or do not understand a specific point that is made because not every word is written down on the slides.
* Luc has been great with the explanations of everything in lab and is super helpful if I am ever confused about anything. He pushes my brain to find the explanation that I already have within me, I just need extra guidance. I enjoy the lecture material and I feel it is well explained, however I wish the notes provided these explanations as well because they are easy to forget. I also with more than anything that this course has practice exams or previous exams for studying. There are not many tools to help with the studying process for this course.
* One thing to improve upon would be adding the Echo360 captures so if you missed something in class you can go back and listen to it again.
* I think lab experiments and giving real life examples in lecture helps me the most understand the physiology of the materials.
* Adding more information in the lecture slide that could be potentially be added on exam could help us further.
* Could the powerpoint slides be more detailed? The notes added in class are hard to read afterwards and not nearly as detailed as required for understanding. A lot of the time I have to basically relearn the concepts at home after class, because things move on quickly before I have fully understood, so it would be helpful to have more detailed powerpoint notes.
* Professor Van Cleve is very friendly and helpful.

*7) Please feel free to share any ideas, comments, or concerns as we enter the second half of the semester.*

* I would just like to briefly address two things about lectures:

1) sometimes the handwritting of the additional in-class notes is a little difficult to read

2) many times, after finishing writing down the notes, the slide immediately changes during lectures and we may not be able to follow as closely as expected, so a longer pause before moving on would be much appreciated.

* My biggest suggestion would be to include echo recordings of the lectures.
* I think an outline or a study guide of topics for each chapter to know and learn for each exam would be extremely helpful; for example, what equations to know how to use, what subjects we should know more in depth and what subjects we need only a basic understanding of.
* Can the notes be written in black instead of blue? Sometimes it is really hard to see
* I`m concerned about the last exam. As we have become adjusted to your exam style, how is switching it up on us at the very end going to effect us?
* I think there was a decent amount of overlap with the evolution course (BIO303) at the being of the semester. I know some students may not have taken the course and that it may be needed as a building block for the rest of the course, but if you are looking for a place to remove some material to make space for other material I would remove some of the overlap with evolution (speciation, phylogeny, etc)
* I feel like using Eco360 for class would help.
* I can not re-iterate this enough, if there is a grade disparity between the TA's grading there should be a TA adjusted points added to the end of the lab, such as the physics department uses, in order to make the grading scale fair.
* I would definitely recommend uploading lectures in the future.
* make lecture more exciting or give us more interaction or something.
* I feel that it would be helpful to record lectures because sometimes the written notes on the slides don't make as much sense without the spoken lecture. It would be especially useful for topics that hadn't been covered for an extensive period of time.
* Since there is a lot of material covered, a study guide or topic guide as we approach the exams would be really helpful to conceptualize the main ideas and make sure that we know the important details. Sometimes it's hard to distinguish the big picture from the smaller details, which makes studying a little difficult.