ZOOL 571 Course Profile

The course description and Winter 2021 syllabus of Zoology 571, **Palaeobiology of Vertebrates**, can be found here.

Generally offered in: Winter semester

Prerequisite(s): 3 units from Zoology 377, 379, or 403

Antirequisite(s): Credit for Zoology 571 and either Zoology 571.01 or 571.02 will not be allowed

Interview with Dr. Jessica Theodor

In your own words, can you give a brief summary of what this course is about?

The course covers the fossil record of vertebrates, primarily from a zoological perspective rather than a geological perspective. So we don't focus too much on the geology, we focus more on the biological implications and biological interpretations of animals that we find in the fossil record. So we'll cover fish, amphibians, reptiles, mammals, and the vast majority of the extinct lineages that didn't survive to today. We will also cover ancestry and the diversity of modern lineages.

What is the main skill you want students to take away from this course?

There's a couple of big skills. Most students in biology don't get much training in macroevolution, and looking at major trends and changes over time. They don't get much sense of the history of the animals they're studying, and that's really important. You ignore the phylogenetic history of animals at your peril; there's a lot of things that many people don't realize are just inherited. So that's one big theme. The main skill I want them to get is to learn to read a scientific paper in detail. In the discussion sections we have every week in the lab component, we read papers that are related to what we're covering in lecture and discuss them. That teaches students to take apart, piece by piece, what goes into a paper, how to interpret what's there, how to think through the paper and whether the evidence supports it. This skill is important to the term paper assignment, which students will work on through the term. Palaeontology is historical rather than experimental, someone else ran the experiment so we don't get to control it, but we can figure things out from it.

Will a textbook be required for the class? If so, which?

There is a required textbook, Vertebrate Life. It is the same book that is required for Zoology 403.

What aspect of the course do you think students struggle with the most?

I think students struggle with thinking through problems. On exams they should be writing down what they've learned and be able to think through problems, not just the information that they've memorized from the textbook.

What can students do to be successful in this course besides attending lectures?

At the end of the week, take your notes and write a shortened version of the important points. This way you keep up with and keep processing the material. If you just take your notes and you try to memorize them all at the end, there's way too much information and you're not going to have done the exercise of working out what the important points were. Keeping up with your notes and extracting them to a smaller set of information is really important.

What do you think is the most effective way that students can prepare for an examination in the course?

Going through the notes and making shorter versions of your notes, and then going through the study notes you made and picking out things that you think would make good questions. Then trading with friends and trying to answer their questions.

Are there other resources that students can use besides the textbook and lecture notes?

The papers students will be reading in the discussion section will help amplify the themes in the lecture component of the course, so they would be useful as well.

Online delivery

***** The features of the class could potentially differ from these responses as the format of the course is solidified.

Will classes be in person or delivered online? **Online**

Will lecture by synchronous or asynchronous? **Mostly synchronous**

Additional comments:

Classes will be predominantly synchronous, but there may also be some asynchronous lectures in part depending on the preferences of the students.

Will classes be recorded? **Yes**

Will this course have a lab or tutorial component this Winter 2021 semester? **Lab**

What will the laboratory component of the course look like?

The lab component is a discussion section. It is once a week. A week ahead, I will post readings for the next week and the expectation is for students to read them and come prepared to discuss. Students should come with questions about things they didn't understand about the paper that we can discuss.

Are there other ways the course has been adjusted from previous years?

Because of the online format, the University is restricting us to a two-hour exam final exam rather than a three-hour final exam. Because of that, and because of the difficulties associated with online tests, I'm going to make two shorter midterms.

Extra questions

Do you have any other advice for incoming students taking ZOOL 571?

The main advice I have is: don't leave things to the last minute, especially with respect to the term paper. There are deadlines throughout the semester to help students, but it's really important to keep up and do the readings as well.

Do you have any stand-out memories from teaching this course?

A number of students who have taken this course have actually gone on to professional work in palaeontology. The discussions are always really memorable, they're a lot of fun. I think students can be intimidated and afraid of the discussions at first, but I get emails every time I've taught this course, from students, telling me that it turned out to be their favorite thing about the course.

This interview transcript was edited for clarity and brevity