

# Comparative Vertebrate Anatomy

Summer Session (2) | Coastal Biology Building 110 | Team: Mehta, Carrillo & McElfish

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**Lecture:** Tuesdays & Thursdays 9-12:30 pm, CBB 110

[July 25- August 26th, 2022 ]

**Lab:** Tuesdays & Thursdays 1-4 pm, CBB 115

[Teaching Team/ Topics/ Assignment order/Assignments /Readings/Point distribution may change after each summer session]

In this class, we will be exploring vertebrate diversity! **Our course is in person- whoopee!!!!** You are expected to attend lectures, watch 2-3 snippets of lectures on your own *when necessary*, complete readings, quizzes and projects to earn credit for this course. We will be interacting with you throughout our lectures, labs and office hours. Our office hours will depend on your availability which we will collate from the **Getting to Know You** Survey.

As you will notice, deadlines for readings, completing assignments and quizzes are within the working week. Deadlines will **mostly** be Monday through Friday by 10pm with the occasional Saturday so please plan accordingly. We are available for you Monday - Friday from 9-5 pm.

## Meet Your Teaching Team!

<p><b>Dr. Rita Mehta - Professor</b> <a href="mailto:rmehta2@ucsc.edu">rmehta2@ucsc.edu</a></p> <p><b>Interests:</b> Skull and axial diversity, the interaction between feeding behavior and body shape, and the evolution of elongation in vertebrates</p>	<p><b>Office hours:</b> Tuesdays and Wednesdays</p>
<p><b>Elsie Carrillo - TA</b> <a href="mailto:elpcarri@ucsc.edu">elpcarri@ucsc.edu</a></p> <p><b>Interests:</b> reptiles, diving physiology, morphology, ecology, and evolution</p>	<p><b>Office hours:</b> Wednesdays and Thursdays</p>
<p><b>Maya McElfish - Is in the field until mid-August.</b> <b>See you all in a few weeks.</b> <a href="mailto:mmcelfis@ucsc.edu">mmcelfis@ucsc.edu</a></p> <p><b>Interests:</b> chemosensory ecology, reptiles and amphibians, fishes, experimental design and behavioral ecology</p>	<p><b>Office hours: TBD,</b> <b>beginning August 15th,</b> <b>2022</b></p>

## FAQ

- **Will any of this class be remote?** Not if we can help it. There will be assignments you will need to do on your own but the expectation is that you attend lecture and lab. There are only 10 lectures and 10 labs so we anticipate a near perfect attendance. We are all committed to being here so let's make sure we do it right. In the chance there is a COVID surge, we are prepared to be on-line and help everyone finish up the course.
- **Is there food in the Coastal Biology Building?** We have a vending machine but we are not sure how well stocked the machine is these days due to limited in-person summer courses. To be safe, please pack a lunch. You will be so hungry if you don't pack a lunch or snacks because after lecture, you have to work through a 3-hr lab. It is hard and unpleasant to have a lab when you are hungry- trust us. We know!
- **How does lab work?** Lab, like lecture, is twice a week. After a 30 min  $\pm$  break, where we will grab lunch, it will be time for a hands-on lab. Be ready to discover, work and have a great time.
- **Are there late penalties for assignments and quizzes?** We are offering a 24-hr grace period for every deadline. After each 24-hr period in which the assignment or quiz is not turned in, you will be docked 10% of the final grade for each calendar day the assignment is late.
- **Are there office hours?** While we will be working closely with all of you, we will still have office hours but are waiting to receive some feedback about your availability through the "Getting to Know You" survey.
- **Are there any unusual assignments in this course?** **Yes.** We are glad you asked. The unusual assignment is our Comparative Vertebrate Anatomy (CVA) Challenge. This assignment has 10-12 small assignments you should be doing as soon as our first day of class is over. The assignments #'s 5,6,9,10,&12 can all be tackled within the first week and you need to only complete 10 of the 12 for full credit. The last 2 are extra credit.
- **Are there participation points?** Yes. In lecture, you will be awarded 1 point each time you attend class. There will be a total of 10 participation points.

## COURSE SCHEDULE

Week 1 Day 1	Tuesday July 26	<p><b>Lecture:</b> Vertebrate Diversity and Evolution</p> <p>Week1, Lecture1</p> <p>Week1, Lecture 2A</p>	<ul style="list-style-type: none"> <li>• <i>Your Inner Fish</i> Chapters 1 &amp; 2</li> <li>• <a href="#">Textbook Chapter 2</a>: Origin of Chordates</li> </ul> <p><b>Prerecorded Lectures to Watch and Note-Take:</b></p> <p>Lectures 2B, 2C (please watch these by Thursday lecture)</p> <p><b>Due by Tuesday, July 26 at 10pm:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Getting to Know You survey</a> is due on Tuesday, July 27th at 10pm)</li> <li>• <a href="#">Quiz #1: Your Inner Fish: Chap 1 &amp; 2</a></li> </ul> <p><b>(Due Wednesday, July 27th at 10 pm)</b></p>
Week 1 Day 2	Thursday July 28	<p><b>Lecture:</b> Vertebrate Evolution &amp; current topics</p> <p><b>YIF Discussion</b></p>	<ul style="list-style-type: none"> <li>• <i>Your Inner Fish</i> Chapters 3 &amp; 4</li> <li>• <a href="#">Textbook Chapter 3</a>: Vertebrate Evolution</li> <li>• <a href="#">Quiz #2: Your Inner Fish: Chap 3 &amp; 4 (Due Friday, July 29th at 10 pm)</a></li> <li>• Practice exam on Chapters 2 and 3 Lectures -- <b>This is optional!</b></li> </ul>
Week 2 Day 1	Tuesday August 2nd	<p><b>Lecture:</b> Skull Diversity and Feeding Parts 1 &amp; 2</p> <p><b>YIF Discussion</b></p>	<ul style="list-style-type: none"> <li>• <i>Your Inner Fish</i> Chapters 5 &amp; 6</li> <li>• <a href="#">Textbook Chapter 7</a>: The Skull</li> </ul> <p><b>To-do: Start studying for midterm 1!</b></p> <p><b>Watch Prerecorded: Finish Skull Diversity and Feeding Lecture</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Quiz #3: Your Inner Fish: Chap 5 &amp; 6 (Due by Thursday, August 4th at 10 pm)</a></li> </ul>
Week 2 Day 2	Thursday August 4th	<p><b>Lecture:</b> Skull Diversity and Feeding Part 2</p>	<ul style="list-style-type: none"> <li>• Continue reading <a href="#">Textbook Chapter 7</a>: The Skull</li> </ul>

		<b>YIF Discussion</b>	<p><b>Midterm Exam # 1: Information is from Textbook Chapters 2, 3, 7&amp; <u>Your Inner Fish</u> (Chapters 1-6).</b></p> <p><b>Midterm will be available to take on Canvas between Thursday, August 4th at 9 pm and Saturday, August 6th at 10pm.</b> The exam is timed with the base allotted time = 1.5 hours. <u>The exam is OPEN NOTES ONLY.</u></p>
Week 3 Day 1	Tuesday August 9th	<p><b>Lecture:</b> Axial Skeleton &amp; Muscle Properties</p> <p><b>Norris Center Museum of Natural History</b></p>	<ul style="list-style-type: none"> <li>• <u>Your Inner Fish</u> Chapters 7 &amp; 8</li> <li>• <u>Textbook Chapter 8:</u> Axial Skeleton</li> <li>• <u>Quiz #4: Your Inner Fish: Chap 7 &amp; 8 (Due by Wednesday, August 10th at 10 pm)</u></li> </ul>
Week 3 Day 2	Thursday August 11th	<p><b>Lecture:</b> Locomotion</p> <p><b>YIF Discussion</b></p>	<ul style="list-style-type: none"> <li>• <u>Your Inner Fish</u> Chapters 9 &amp; 10</li> </ul> <p><b>To-do: Start studying for midterm 2!</b></p> <ul style="list-style-type: none"> <li>• <u>Quiz #5: YIF: Chap 9 &amp; 10 (Due by Friday, August 12th at 10 pm)</u></li> </ul>
Week 4 Day 1	Tuesday August 16th	<p><b>Lecture:</b> Locomotion Cont'd</p>	<ul style="list-style-type: none"> <li>• <u>Your Inner Fish</u> Chapters 11</li> <li>• Start <u>Reading Standen et al. 2014</u></li> </ul>
Week 4 Day 2	Thursday August 18th	<p><b>Lecture:</b> Locomotion, cont'd; Water to Land Transition</p> <p><b>YIF Discussion</b></p>	<p><b>Midterm 2 will be available to take on Canvas between</b></p> <p><b>Thursday, August 18th at 10pm to Saturday, August 20<sup>th</sup></b></p> <p><b>at 10 pm.</b> The exam is timed, with the base allotted time = 1.5 hours.</p> <p><u>The exam is OPEN NOTES ONLY.</u></p> <p><u>CVA Challenge Assignment (Due on Monday, August 22nd by 12 pm)</u></p>
Week 5 Day 1	Tuesday August 23rd	<p><b>Lecture:</b> Water to Land Transition</p>	<ul style="list-style-type: none"> <li>• <u>CVA Challenge Assignment (Due on Monday, August 22nd by 10 pm)</u></li> </ul>

		<b>Discussion about Standen et al. 2014</b>	<b>Friday, August 26 at 10 pm:</b> • <a href="#">Standen et al ancillary questions</a>
Week 5 Day 2	Thursday August 25th	<b>Final Exam</b>  All lectures & Your Inner Fish (Chapters 1-11). I will choose the most salient points for both Lecture and Your Inner Fish.  Feel free to take the final during class time OR attend lecture time to ask questions.	The final exam will be available to take on Canvas between Wednesday, August 24th at 8 am and Thursday, August 25th at 10 pm. The exam is timed, with the base allotted time = 2 hours.  <u>The exam is OPEN NOTES ONLY.</u>

### ETIQUETTE DURING CLASS

To ensure that all students can benefit from lecture in an environment that is courteous, non-disruptive, and conducive to learning, please follow these tips:

- Arrive on time
- Raise your hand to ask questions
- Listen when others ask questions
- Be engaged when we break out into groups
- No eating or drinking in class (we go over COVID protocols on Day 1)

### ACADEMIC INTEGRITY & THE HONOR CODE

- Your work on exams, quizzes, and projects should be original work. Worried your work might have plagiarism? Ask us to review it!
- We will do our best to make it clear what resources we expect you to use (or not use) for each project (your peers? Your textbook? The internet?). If you aren't sure, ask us to clarify!
- There is zero tolerance on infractions to the honor code. Check out [this link](#) to view university policies and regulations.

### HOW TO LEARN ANATOMY

- Form study groups and have each person take turns explaining concepts and how they relate to one another.
- Review your notes every night, make flash cards, rewrite your notes, embellish your notes with color as you review them.
- Listen to lectures and actively take notes.

## **DRC ACCOMMODATIONS**

Paperwork and arrangements will be online through the Accommodate system. Evidence for accommodations should be provided before the first exam so arrangements for testing may be organized in a timely manner. If you can't get your paperwork in, no worries, just talk to your Teaching Team. If you need accommodations, we will give them to you- Just ask us.

## **GRADING**

- Syllabus agreement = 5 pts
- Attendance = 10 pts (2 points for each week/ 1 pt for each lecture)
- Getting to know you = 20 pts
- 5 quizzes (#1 = 10 points; #2, 3, 4, and 5 = 15 points each) = 70 pts
- 2 midterms (100 pts each) = 200 pts
- Final exam (100 pts)
- CVA Challenge = 50 pts
- Follow-up questions to reading assignment: Standen et al. 2014 = 30 pts
- **Total Possible Points: 485 points**

**LATE ASSIGNMENTS.** We offer a 24-hr grace period for every deadline. Late assignments submission will be docked by 10% of the total assignment grade each calendar day it is late after the grace period.