

**Tentative Syllabus**  
**BIOE 127/127L, Ichthyology (Summer 2016)**  
**Lecture: Mon/Weds. 1 - 4:30pm, COH 118 (Marine Lab)**  
**Lab: Mon/Weds. 9am – 12pm, LG Discovery 128 (Marine Lab)**

**Instructor:** Gary Longo, [glongo@ucsc.edu](mailto:glongo@ucsc.edu)

**Office hours:** Tues. 10 – 11am & 1 – 2pm, COH 247 (Bernardi Lab)

**TA:** Eric Garcia

**Office hours:** TBD

**Course Description:** An introduction to the biology of jawless, cartilaginous, and bony fishes—their classification, evolution, form, physiology, and ecology.

**Text (optional):** The Diversity of Fishes: Biology, Evolution, and Ecology (Helfman *et al.* 2<sup>nd</sup> edition: ISBN-10: 1405124946) & Guide to the Coastal Marine Fishes of California (Miller and Lea). There will two copies of The Diversity of Fishes at the Science and Engineering library.

**Enrollment:** YOU MUST DROP YOURSELF IN YOUR PORTAL!! –Summer sessions will not drop you for non-payment and I will not drop you for non-attendance.

Session 2 Drop Deadline – Monday August 1<sup>st</sup>

Session 2 Withdraw Deadline – Friday August 12<sup>th</sup>

**Course Information:**

**Lectures:** Due to our schedule there will be two lectures per day. Approximately, the first lecture will be from 1-2:35pm and the second will be from 2:50-4:30pm. We will break for 10-15 minutes between each lecture and for about 5 minutes in the middle of each lecture to keep our sanity. Please feel free to bring low noise snacks (i.e., no Pop Rocks covered carrots) and whatever caffeinated beverage you need to stay awake for 3.5 hours of fishy facts.

**Exams:** There will be 2 exams (1 midterm and 1 final), which will consist of a combination of multiple choice, fill in the blank, and short answer essay questions. The midterm will be on **Monday August 8<sup>th</sup>** and the final will be **Wednesday August 24<sup>th</sup>**. Each exam will account for 40% of your overall course grade. If it was not discussed in class then it will not be on an exam BUT there will likely be critical thinking questions.

**Paper:** You will need to summarize a scientific paper based on fish and review two of your classmates' summaries. First, find a primary research paper on fish from a peer-reviewed journal. Write a summary of the paper, explain why the work was done, what the main research questions are and what your comments

are on the paper. Did you like the paper? Why, why not? This should be no more than two pages, double-spaced. Print **two** copies of your paper (double spaced) and swap with two classmates on **Wednesday August 3<sup>rd</sup>**. You should have two people reviewing your paper and you should review two students' papers. Return your reviews to one another no later than **Wednesday August 10<sup>th</sup>** so that you will be able to make edits to your work before the final deadline on **Monday August 15<sup>th</sup>**. *Please let me know if you do not receive reviews back on time.* Incorporate the reviewers' comments into your work and print this final draft. Your grade for this assignment will include the quality and thoroughness of your peer reviews. The paper will account for 20% of your course grade.

For more details about this assignment check the assignment link on the class webpage.

### **Lab Information:**

**Labs:** Labs (except the shark dissection and tidepools lab) will take place in the Seymour Center wet lab a.k.a. Lg Discovery 128 (the entrance is near the tail of the largest skeleton on display in the world, if you can't find said skeleton then all is lost). On **Wednesday August 3<sup>rd</sup>** we will meet at **6:30 AM** to go tidepooling at Natural Bridges. We will be done no later than 9 AM so you can go home and sleep before lecture starts. The sharks we dissect are preserved in formalin so we will dissect them on campus underneath fume hoods in **Thimann Labs 217**. The date for this lab is **Monday August 15<sup>th</sup>**. *Note: there is no lab the first day of class Monday July 25<sup>th</sup>. Labs are mandatory (see make-up policy below).*

All labs and subsequent write-ups should be submitted in a bound lab notebook. Notebooks need to be dropped off by 5pm on **August 25<sup>th</sup>** at the Bernardi Lab (COH 247). Notebooks will be graded based on thoroughness and completeness of each lab and 10% of the overall notebook score will be based on neatness and organization. The notebook will constitute 65% of your lab grade.

**Skulls:** In order to better appreciate the complex mechanics of bony fishes' skulls, you are required to disarticulate and recompose a fish skull. It is recommended that students work on this project in groups of two or three (no more). You will then need to draw the skull. Then you will label each bone **ON YOUR DRAWING**, no need to label the skull. The skull will get a single grade (everybody gets the same grade for the skull of their own group) but each drawing gets its own grade, so people in the same group may get a different overall grade. The skull will make up 25% of your lab grade and the skull drawing is worth 10%.

### **General:**

**Make-up policy:** Make-up exams will only be allowed for students who have a substantiated excuse approved by the instructor. Leaving a phone message or sending an e-mail without confirmation is not acceptable. Labs are mandatory. Make-ups for missing a lab consists of a 1 paragraph summary of a recent biology journal article highlighted in the news AND a 4 minute power point presentation on the article to the class. Any other missed labs will result in zero credit for that lab.

**DRC students:** If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me as soon as possible, preferably within the first week of the Summer Session. Contact DRC by phone at [831-459-2089](tel:831-459-2089) or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu) for more information.

**Field Trips:** It is likely that we will visit both the Steinhart Aquarium and fish collections housed at the California Academy of Sciences and the Monterey Bay Aquarium. These trips are optional, as they will likely occur on Thursdays or Fridays.

**E-mail Etiquette:** Eric and I are happy to answer emails/questions about course material, general fish related queries, or discuss the meaning of life, however we are not happy to provide information that is easily obtained on the website or on this syllabus. So before you ask us a question about what the paper is all about or what percentage of your grade is the final worth, check the website and/or ask a friend. Please don't load our inboxes with laziness. We reserve the right to ignore such emails.

**Plagiarism and Cheating:** Don't do it. If you are caught cheating or plagiarizing, you will receive a zero for that exam or assignment and I will file a report with the university.