

Biology 427 Biomechanics Poster Projects

I: Overview

The purpose of these projects is to give you an opportunity to explore in detail a topic within this course that interests you most. This exploration involves your posing a question about a biological process or phenomenon, examining in the literature what is known about the details related to your question, and posing a *quantitative* answer to the question you raise. You can approach this assignment as one that is

- similar to a more detailed homework problem that you would create for future biomechanics students
- an expansion of an existing homework problem that you found interesting
- an expansion of a laboratory exercise that we have done

Here is an important point: we ask that you pose a question and address it *quantitatively*. In addition, you must give the rationale for raising the question and some background about the relevant biology and physics that underlies the problem you pose. As such, it is extremely important to select a topic or problem that is sufficiently small or focused so that you can address it in sufficient detail in a poster. You must provide both the biological background and the quantitative arguments in your poster.

In short, we ask that you read the literature, gather together disparate pieces of information to answer a question that you pose. Do not simply write a "book report" telling us what others have done or thought. Rather be critical in your reading of the literature. Use ideas or information that others have put forward along with course material to examine your issue. Indicate the relevant mechanics and what remains to be understood about a particular problem or what is wrong with past views. Be brave in formulating *quantitative* relations from material you have learned in the class.

II: Instructions

**Posters are due online: (there will be a Catalyst Dropbox for them):
MONDAY Dec 5 at 5pm when the Dropbox will close.**

- Only one submission per project is needed.
- You are encouraged to use faculty and TA office hours to discuss poster ideas
- You can use the poster template provided on the course website or create your own
- Each student team (minimum 2, max 3) will present their posters in their lab sections or in class time set aside for poster presentations
- Be sure to review existing posters in the halls of Kincaid and Hitchcock for examples from professional meetings
- Posters will be evaluated for clarity (how clear is the question you are asking, how clear are you explaining the background information and your approach) and quantitative rigor (did you use any math/algebra?)
- Sample posters from previous classes will be made available.

2 pts for project proposal (done in lab)

8 pts for quantitative content

6 pts for clarity, organization, and information content

4 pts for clarity of verbal presentation