COMPARATIVE ANIMAL PHYSIOLOGY
INDEPENDENT PROJECTS

The purpose of these independent research projects is two fold. First, we want to give you an opportunity to experience the complete research process as experienced by many professional scientists. This process includes several steps: thinking of a question, designing a study to address that question, conducting the experiments, presenting the results of the study orally to the scientific community, and writing up the work for publication in a journal. The second purpose is to allow you to branch out and study some aspect of physiology that you find particularly interesting. This is an opportunity for you to be as creative and inquisitive as you like.

In designing your independent project, we encourage you to integrate and expand upon techniques you learned during the standard lab exercises, although you can also use a new technique if it is practical and informative. In any case, choose something that you think you will really enjoy working on and thinking about because you will be working on it for about five weeks. To help you plan ahead during this normally hectic time, we have outlined below the order of events related to the independent projects.

ORDER OF EVENTS

1. The first thing to do is to think of two or three potential projects. Unfortunately, you will need to decide on something before we have completed all of the standard labs. Thus, to increase the range of possibilities, it would be a good idea to skim through all of the labs to determine what we have the capacity to study. In addition, there is a link to a list of projects from past animal physiology classes on our course web page. We will begin asking you informally about project ideas during the 6th week.

2. During the 7th and 8th weeks of class your research team will need to make an appointment with your professor to discuss at least two concrete ideas for projects (download Mini Project Proposal sheets from the web site). At that time, you will decide on one project. Your professor will request that your team find and read at least 2 primary papers related to your topic.

You may not be able to obtain all the articles that you want/need at the UPS library. However, Interlibrary Loan is a great way to get articles that we don’t have; it’s easy, fast, and reliable. If you have not already signed up, go to the following page and register to use this great resource: http://illiad.ups.edu/illiad/logon.html

3. During the 9th week your research team will do any necessary prep work for your project and turn in a 5-week schedule for how you plan to complete your project. Prep work may include gathering materials, ordering animals, doing preliminary experiments, etc. The 5-week plan is key to completing your project on time.

** Each week your research team will turn in a written progress report and plan for the current week. Along with the 5-week plan, these self-reports will help you stay on track and complete your project on time.

4. You will begin your research during the 10th week. Each member of your research team will be expected to have the 2 relevant primary papers requested during the 8th week.
5. Two additional relevant papers per researcher are due in lab during the 12th week.

6. A first submission of your Introduction and Materials & Methods sections will be due in lecture Monday of the 12th week. These will be edited and commented on by two of your peers.

7. A complete plan of your results section will be generated in lab during Week 14.

8. Your research team will give a group oral presentation of your work during the last week of classes at your scheduled lab time (15th week).

9. Your final paper is due on the last day of classes (15th week). If you chose, you may have a no-penalty extension until 4 PM on the last day of reading period.