

# BIOL 1521: HONORS BIOLOGICAL PRINCIPLES II

Spring 2007

*Tentative schedule for labs*

The labs will be held in room ESM G2. **Labs will begin the first week of classes (January 8, 2007).**

## **BIOL 1521 Laboratory Policies**

1. BIOL1521L is primarily independent project based research conducted by students in groups. Please review the expectations for participation and grades in this course.
2. **NO FOOD OR DRINK IN THE LAB!!!** This is not a request; it is against federal, state and institutional rules. Failure to comply will result in the submission of "F" as your lab grade for the semester.
3. **BE CONSIDERATE OF OTHER LAB SECTIONS.** Clean up your lab station after each lab and report any messes left behind previous lab sections to your TA.
4. **THERE ARE NO MAKE-UP LABS FOR UNEXCUSED ABSENCES!!!!** An unexcused lab will cost you 5% of your overall 1521 grade. It is to your advantage to (a) attend, (b) document your absence, (c) make arrangements in advance of any known absences for school or personal activities to make up the lab in another section. Documented absences can include: an illness of your own or within your family, schedule conflict with an obligation to an official organization, auto accident, etc. [FYI: Full-time students can be exempt from/rescheduled for jury duty with proof of full-time enrollment.]  
In the event that you miss a lab, or will need to be excused from a lab in advance of it, Dr. Rupal Thazhath should be contacted at [rupal.thazhath@biology.gatech.edu](mailto:rupal.thazhath@biology.gatech.edu), or you may leave a message at the Biology main office: (404)-894-3700; 201 Cherry Emerson Building. There is no penalty for an excused absence.
5. Proper attire needs to be worn in lab. **No open-toed shoes.**
6. All injuries or accidents must be reported to the lab TA **IMMEDIATELY.**
7. The distribution of grades and the modes of assessment have been determined to provide you with a diverse set of opportunities to demonstrate your command of the course content and the scientific method.
  - The lab midterm presentations will be worth **20%** of your lab grade.
  - The lab final presentation is worth **20%** of your lab grade and is comprehensive.
  - You will maintain a lab notebook, worth **10%** of your lab grade.
  - There will be one end of term project write-up, worth **20%** your lab grade.
  - Participation in group projects is very important and you will be evaluated by your TA, Dr. Thazhath and more importantly, other students in your group as to whether or not your overall involvement was adequate. This will be worth **15%** of your lab grade.

9. **Plagiarism will not be tolerated.** Anything written in your lab notebooks, presentations or project write-up that is not an original idea of yours must be referenced. Direct copying from the lab manual OR from another student's notebook or write-up will result in a grade of "Zero" for that assignment. Your conduct in this class is expected to conform to the Georgia Tech Honor Code which can be found at (<http://www.honor.gatech.edu>). Please familiarize yourself with its expectations and responsibilities.

## **Overview**

1521L has been designed to expose you to various concepts in Organismal Biology by actively involving you in the research experience. Model organisms will be used and maintained by your group in order to address key biological questions that you will come across in the lecture component of 1521. The following are the model organisms you may consider using to address your biological questions:

*Daphnia magna*

*Daphnia pulex*

*Artemia* sp.

Crayfish

*Lemna minor* (you may also be provided with other species of *Lemna* as well)

The biological questions you plan to address must cover some aspect of organismal biology. For instance, you may pick your model organism and design your experimental plan based on either behavioral ecology, physiology, evolutionary questions or anything within the scope of your lecture syllabus that you may be interested in. You may use a combination of techniques such as cell and molecular biology, genetics, biochemistry etc. Your TAs and Dr.Thazhath are available to guide you in figuring out which techniques are applicable to the biological questions you are asking and also to help you understand and apply these techniques you choose.

## **Group Research Proposal**

You are expected to turn in a research proposal as a group by the week of January 22- January 26, outlining your experimental aims and objectives, biological significance to your aims, experimental plan, materials required, timeline and expected outcomes in the form of a hypothesis/null hypothesis. You will be graded as a group on this assignment. This will be worth **20%** of your overall lab grade.

## **Notebooks**

There will be 2 random notebook checks at any point during the semester, each worth **5%**. Your TA will randomly pick a lab in your notebook on any given day and will grade you for that lab. This entails that your lab notebook be up to date every lab period. This will be worth a total of **10%** of your grade.

## **Project Reports**

You are required to turn in a comprehensive project report at the end of the semester. This should outline your experimental objectives and any progress made toward your goals, in the form of results and a discussion/conclusion section. More details will be given at the midterm mark. This will be worth **20%** of your overall lab grade.

## **Mid Term Presentations**

You will be expected to present a report outlining the progress you have made in achieving your research objectives the week of Feb 26-Mar 8. This will be a forum for you to present your idea and progress, and also receive constructive criticism from your peers and instructors. You will then have the opportunity to reformulate your research plan if need be. This will be worth **20%** of your overall lab grade.

## **Final Presentations**

At the end of the semester (week of April 2-April 6) you will be expected to present a final overview of the objectives and the results of the experimental plans your group obtained during the course of the semester. This will be worth **20%** of your overall lab grade.

## **Participation Grade**

You are expected to contribute equally to all aspects of group and individual work. You will be evaluated by members of your team, your TA and Dr.Thazhath. This includes involvement in outlining research ideas, execution of your groups' research plan, and presentations during the semester. This will be worth **10%** of your overall lab grade.