Undergraduate Researcher Expectation
Revised Dec. 2011

NAME:

General Expectations- One **year is a minimum amount of time you need to plan on being involved in the lab**, higher consideration will be given to those who can compete to multiple years. You can get credit for at least some of the research time by registering for BIOL 4850L. No more than 1 S.H. per term, 2 S.H. maximum can be applied to your biology major requirements. It is also assumed that this research is a priority for the student, not just getting credit hours. I consider undergraduate students as **apprentice scholars** and scientists, not as students in the traditional sense. My laboratory is not a classroom. It's a **research work place** where you do your scholarship.

Basic Expected Timeline Research Progression

First Term- In the lab you should learn basic skills, pipeting,, making solutions, lab safety, etc. Expected to attend lab meetings unless there is a conflict.

1. **10 hours a week working on your research project** is a reasonable amount of time to spend. Learning some of the techniques you will need in order to contribute to the research project.
2. The student should be discussing the science and experiments being designed to address the questions with everyone in the lab.
3. The goal of the first term is to get the student to feel comfortable in the lab and orient his/her thinking towards the scientific questions being addressed by the laboratory**.**
4. You are expected to doing some of the housekeeping chores in the lab. (We don't have maids that wash the glassware, etc.)
5. We will assign the student (in consultation with the student) to a small research project

Following terms-.

1. Design your experiments and preparation for experimentation in the **first few weeks.** Make sure you have all the reagents and equipment you need.
2. **In the next period of time** the student should concentrate on learning any additional techniques you may need to complete your work.
3. Execute the experiments **(indeterminate time)**.
4. Presentation of results to lab mates.
5. Revise research plan. **(indeterminate time)**
6. Repeat experiments and embark on new experiments. **(indeterminate time)**

Grading guidelines for those who are doing research for credit:

Some compensation for doing research can be earned as credits toward graduation but the main value is in the accomplishments you obtain by this experience. The student should

register 1 or 2 hours of Biol 4850L (You'll need to talk to me then obtain a permit from the Biological Sciences Office). Since this is an accomplishment dependent activity the grading policy for experience is based on the product of your efforts. The following are the guidelines I use to assign a grade. These guidelines are stated on a per credit hour basis. These represent the minimal standards for each grade level and I can modify these guidelines depending on extenuating circumstances. Since research does not always result in clean cut results, these grading criteria can be modified on a case by case basis by Dr. Walker to reflect errors not a result of student performance.

> Grade of A requires at least two high quality results from two separate experiments, carried out **independently**. This does not include demonstration experiments for the purpose of showing the student the techniques. For example of what I expect, two SDS-PAGE gels that are of publication quality from two separate experiments. You demonstrate an insightful understanding of the scientific questions being addressed by the research. Demonstrate that you can take the initiative to do things in the lab.
>
> Grade of B requires at least one high quality result from an experiment carried out on his/her own. For example of what I expect, one gel of publication quality from an experiment is required. The student must demonstrate a high degree of knowledge of the science behind the work.
>
> Grade of C requires that the student has attempted to do several experiments on his/her own (more than two) but without a high quality product. The student must demonstrate an average degree of knowledge of the research.
>
> Grade of D requires that the student has not attempted to do any experiments on his/her own. The student fails to demonstrate even an average degree of knowledge of the research.

I assess you know as one normally does by how well you handle yourself in a conversation. During the course of informal conversation I will be assessing your knowledge of the science we do in my laboratory.

Every researcher is expected to fill out and submit an online progress report every three weeks and submit digital copies of data.

Student Signature:_____ Date: _____

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Undergraduate Student Evaluation Form
Name:

Effort assessment. Does the researcher report progress regularly Yes◯ No◯
Comments:

Estimated hours per week:

Example of initiative:

Example of displaying an appropriate level of scientific understanding:

Documentation of productivity

First independently produced result. Comments:

Second independently produced result. Comments:

Description of additional productivity above the minimal.

Notes: