

## Expectations for Undergraduate Researchers *Last updated 8/19/2019*

Welcome to the Woo Lab! Below are some guidelines for working in the lab that apply to all undergraduate researchers (volunteer, fellowship, or taking research for credit).

1. **Don't be afraid to ask questions!** Undergraduate research is NOT A CLASS. Although you are expected to be familiar with basic molecular and cell biology concepts (those covered in BIO 002 and BIO 110), you will not get "points" taken off because you don't remember something. It is OK to ask for clarification or to look something up – in fact, those are marks of a good scientist! It means you are paying attention and demonstrates you are thinking deeply about your research project. Failure to ask questions will at best, result in a less than ideal research experience and at worst, could cause you to make a mistake and waste time and expensive reagents.
2. **Probationary period.** New undergraduate researchers will be given a 2-3 week "trial period." Most students will continue working in the lab as long as they have shown their ability to commit enough time and effort to their lab work. However, you should also use this time an opportunity to assess if working in my lab aligns with your interests and goals. Most undergraduate students do not know what working in a research lab is like until they join one. *I will not be offended if you decide my lab is not right for you!* As a professor at research university, part of my job is to provide opportunities for you to learn how scientific research is conducted and learning that my lab's research area is not for you can be an important lesson.
3. **Time Commitment.** Research is not easy and requires dedication and patience. You will find that research is unpredictable and experiments sometimes need to be repeated. You are performing *original research*, not the "cookbook recipe"-style experiments you may have encountered previously in lab courses. You should expect to spend approximately 10 hours per week in lab during the semester and 20 hours per week during the summer. However, even when you're not actively running an experiment, you should try to spend as much time in the lab as possible. Read journal articles about your research topic. Learn about your other lab mates' projects. Ask senior lab members about their education and career trajectories. You will get the best experience if you can commit enough time to the lab.
4. **Check your email regularly.** Important announcements about the lab are usually sent via email.
5. **The lab is a professional setting and you should conduct yourself accordingly.** Although you are a student, keep in mind that there are other lab members, such as technicians, staff scientists, postdocs, and graduate students, for whom research is a career. Therefore, you should aim to treat the lab as you would any other workplace. This includes:
  - **Be punctual.** Just as you wouldn't show up late for a work shift, you should be in lab when you say you will be. When you first start out, you will be working alongside myself or a senior lab member. Even after you are comfortable enough in the lab to work independently, there will be times you will need to work with someone (for example, to learn a new technique). Please be respectful of your lab mates' time and be prompt and on time if you've made plans to meet. Remember that they have their own experiments to tend to. If you are running late, have the courtesy to call/email/text someone to let them know.
  - **Inform me about days off ahead of time.** Research labs do not follow the academic calendar - we pretty much work all year round. Non-teaching lab members such as postdocs and technicians in particular will not necessarily know when it's spring break, finals week, winter break, etc. If you plan to be out of the lab for some time, please email me the dates you will be gone and when you expect to be back. You should also inform any other lab member(s) you are working with. If gone for more than a few days, you should have a plan for how you will put your experiments on hold. *Advanced notice and planning is key!*
  - **Be respectful.** You are expected to treat myself, your lab mates, members of neighboring labs, and support staff with respect and professionalism. Challenging ideas and being skeptical is a normal and important part of scientific research. However, you are expected to offer constructive criticism without invoking personal attacks. Harassment and bullying of any kind will not be tolerated!

## Expectations for Undergraduate Researchers *Last updated 8/19/2019*

6. **Lab notebook:** You will be provided with a lab notebook in which you will record all of your experimental plans, protocols, and results. The lab notebook is a very important part of scientific research and needs to be taken seriously. Be thorough and up-to-date in your record keeping, and avoid being sloppy. Ideally, other lab members should be able to interpret your data and repeat your experiments based off of your notebook alone. Use of electronic lab notebooks (e.g., Benchling, etc.) is allowed if you receive prior approval. Your lab notebook will remain the property of the UC Merced School of Natural Sciences once you have left the lab.
7. **Safety.** You are expected to follow all safety procedures. *Disregarding safety protocols will result in your immediate dismissal from the lab!* Complete and stay up-to-date on all required training. Wear appropriate clothing and personal protective equipment (PPE). Clean up after yourself and replace items in the correct place. Immediately communicate any broken or inoperable apparatus or equipment. Frequently communicate on the status of consumables (chemicals, glassware, tissues, etc.). Follow all established protocols when working with animals.

*The following guidelines are specifically for students enrolled in research for credit (e.g., BIO 195) or on a research fellowship (e.g., UROC, NSF-CREST):*

8. **Enrolling in research for credit (BIO 195).** You must have worked in the lab for at least one semester/summer before you can enroll in BIO 195. In addition, you MUST co-enroll in or have already completed BIO 140 (Genetics) and BIO 150 (Developmental Biology). You have the option of taking BIO 195 pass/fail or for a letter grade. The grading rubric is explained in the syllabus for BIO 195, available by request. I highly encourage you to read the syllabus thoroughly before deciding whether to enroll in BIO 195.
9. **Lab meeting attendance.** Attendance at the weekly Woo Lab group meetings is mandatory for BIO 195 and fellowship students (volunteers are highly encouraged to attend lab meetings but not required). If you cannot attend a meeting, it is your responsibility to let me know beforehand. Repeated absences from lab meeting without explanations will result in you being asked to leave the lab. In general, studying for exams, finishing an assignment, or working on an experiment are not valid reasons to skip lab meeting. It is expected that you will manage your time wisely and make lab meeting attendance a priority.
10. **Lab meeting participation.** BIO 195 and fellowship students are required to present at lab meeting once per semester. You can present either a progress report on your project or a published research article relevant to your project topic.
11. **One-on-one meetings.** BIO 195 and fellowship students are required to meet with me individually once per week. These are short meetings (15-30 min) to discuss research progress and any other issues (classes, grad/med school applications, fellowships, etc.).

---

*I have read this document and understand my responsibilities and expectations as an undergraduate researcher in the Woo lab.*

---

*Signature and Date*