**Welcome to MagMaX Lab!**

**Mission Statement**

My lab has three central goals:

* To do quality science
* To help each lab member to become a successful scientist
* To maintain a convivial and intellectually-stimulating environment

As your advisor, I am not your employer, I am your **mentor**. I am here to help you become a successful, independent and happy scientist.

To accomplish this goal, it is important that we establish effective communication and align expectations with each other. This document provides a framework for communicating the culture of my lab, and how you and I will work together to further your scientific productivity and intellectual development. I believe in mentoring each individual in a manner that best meets their needs, and I look forward to having open discussions about these expectations and revisiting them as necessary to enable your successful professional development. Please note that this document is not a substitute for university rules and regulations, and that those policies and any legal requirements supersede anything in this document.

**What you can expect from me**

* **I will set the scientific direction for the lab and provide the means to pursue those directions**. This will include helping you to find a research topic, writing grants to fund the research, and maintaining the necessary university protocols for us to utilize the laboratory. Additionally, I will seek out collaborators for our work to further your opportunities.
* **Meetings and emails: I will meet with you at least once a week.** In addition, I will do my best to provide an open door policy and respond quickly to e-mails. Please be aware that there will be times when I will be unavailable due to other obligations. For abstracts and small data questions, I will generally be able to review in 3-4 days, for papers and thesis, I will need 2-3 weeks. In the event of a ***lab emergency***, I may be contacted on my cell phone: 801-792-3186
* **I will provide a work environment that is intellectually stimulating, supportive, safe, and free from harassment.** I take extremely seriously any difficulties you experience in relationship to this statement – if there are conflicts with another lab member, please inform me and I will work with you and the other lab member to find a resolution.I will strive to understand your unique situation and am open to your suggestions on how to improve your experience in the lab.

**What I expect from you**

* You will need to **determine the requirements for your individual program and are responsible for insuring that you are in compliance** (including additional requirements from UROP).
* You will **keep me updated** on your research progress and challenges.
* **Seek out professional development opportunities** – being a successful scientist involves more than being good at the bench. You must communicate well (presentations, papers, grants), develop personal skills (lab management, mentoring), and maintain high ethical standards.
* You need to, at least, **acknowledge reception** of my email in the next 24 hours (or next business day if I sent an email during the weekend).
* For students working for **a semester or more in my lab**, you will need to attend, at least, **two seminars from the Education series** offered by the Office of Undergraduate Research: our.utah.edu/events/ures, and present a poster at the Undergraduate Research Symposium (in April).

***You will develop your personal research skills***

* Begin **reading the scientific literature** - read the papers I suggest, run a literature search and read papers suggested by this search. Subscribe to relevant mailing lists.
* Learn how to **plan your experiments and analyses** so that they help you progress on the overall goal of your project. Make sure your experiments/analyses address the question of interest correctly. Develop plans with short/medium/long-term goals.
* Keep **detailed lab notebooks** – these are essential to turn your hard work into a finished report or thesis. Your notes should allow your work to be reproduced (meaning they must be understandable by people other than yourself) and will help to assign credit for authorship. They are required by funding agencies and for any potential patents. You are required to leave the originals behind when you leave the lab for others to build upon your work.
* **Data back-up.** Once it’s gone, it’s gone forever! All data (spreadsheet, manuscripts, notes, figures, photos, drafts, and so on) must be backed up to an external hard drive. *Do not have only one copy of your work!!!*
* Develop your **writing and presentation skills**. As you start to make progress, begin outlining a paper’s figures and drafting the text. Be prepared to go through rounds of revisions before submitting an abstract or paper. **Attend seminars (DLS or special lectures)** – I suggest at least 1-2/month to learn both science and how to give a good talk.
* Consider **applying for fellowships, traineeships, and travel grants**. Not only will an award help your career and the overall lab funding situation, the experience of writing the proposal will help you think about what you are doing more deeply. The office of undergraduate research also offers small grants for field research, lab supplies and conferences.
* Learn how to **accept and utilize constructive criticism**. The feedback from me, colleagues, committee members, and course instructors is intended to improve your work.

***You will contribute to the lab and be a good lab citizen***

I don’t expect that you will be perfect when completing lab work – everyone makes mistakes. However, I do expect to use the equipment with care, to keep a detailed notebook of ALL your lab activities and to let me know **immediately** if equipment seems to be having trouble.

* **Safety come first. You will follow all safety procedures defined in our lab protocols and immediately communicate any safety concerns to me. Always wear close-toed shoes and long pants. Always wear eye protection and gloves when working with chemical. Tie back long hair and do not wear loose clothing, ties and jewelry when using the lathe!!!!**
* It is vital that you **keep detailed lab notes**. Yes, I already mentioned that. Although it may seem redundant or unimportant at times, it will help you during project and help me after you leave.
* Senior students are responsible for helping to train new students in the ways of the world (*i.e.* lab procedures, how individual/group meetings work, literature searching, etc.). **Science is a community** - many people will help you along the way and you should return the favor. Share your insider knowledge of techniques with others.
* **Data belongs to the lab, not to any one individual** – as a result, you will be expected to leave your original notebooks and files when you leave the lab.
* You will **keep lab protocols** **up-to-date**.
* When working in the labs, be polite, neat, and gracious. Always follow their rules. If something breaks during your use, report it immediately to the appropriate person.
* **Be respectful, tolerant of, and work collegially with laboratory colleagues: respect individual differences in values, personalities, and work styles.**
* Consult with me before lending items from to other colleagues, student or faculty.

**Nuts and Bolts**

***Hours and Vacation***

I do not believe in tracking hours – instead, I am interested to see that you are productive. However, if I sense that this is being taken advantage of, the situation will be addressed.

***Meetings***

Come prepared to discuss/present your recent research and next steps. Bring a written agenda including what you have done and what you propose to do in the next week at each meeting. You must also bring your lab notebook.

***Conflict Resolution***

If a conflict arises with another lab member during your time in my lab, I will work with you to find a resolution. If the conflict fails to be resolved or you do not feel comfortable involving me, I encourage you to consult with another faculty in the department, the Department Chair, Chair of your graduate program, or the OEO to attempt to settle the disagreement.